THESE AREN'T THE DRONES YOU'RE LOOKING FOR

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Abstract

The use of unmanned aerial vehicles (UAVs) has grown exponentially since 2001. This thesis seeks to explore how unmanned aerial vehicles have changed the way in which the United States prosecutes its targets. This is important because misusing unmanned aerial vehicles, despite their contributions, risks limiting their use in dangerous situations, leaving the mission up to manned aircraft or ground forces. Case studies of UAV use in Pakistan, Yemen, Mali, and Afghanistan were used to analyze three hypotheses on the impact of the proliferation and seeming reliance of the United States on UAVs. The first chapter challenges the negative stigmas of UAVs and argues for a policy to guide their use. The chapter addresses the question, is it UAVs that are a problem, or is it the implementation of UAVs that are a problem? Furthermore, this chapter establishes UAVs as a natural progression in a technologically superior military. The second chapter explores if unmanned aerial vehicles can be used in places like North Africa in lieu of ground forces. The evidence suggests that although UAVs will have their utility in Africa, they are still no substitute for human engagement in certain circumstances. The third chapter addresses if unmanned aerial vehicles can support both counterinsurgency and counterterrorism operations. The evidence reviewed in this chapter proposes drones can support either mission, but the mission needs to be clear and unambiguous enough to ensure the use of force is consistent with the strategic objectives of the war. In either type of mission, the role of the UAV has to be consistent with the principles the overall mission is trying to achieve. As a natural progression of a technologically superior military, UAVs have proven to be a reliable and dependable intelligence collection platform with a strike capability, but they are no substitute for

human engagement on the ground and require a clear and unambiguous mission to guide the use of force by the unmanned system.

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Contents

Introduction

The use of unmanned aerial vehicles ("UAVs" or "drones" to many) has grown exponentially since 2001.[1] This thesis seeks to explore how unmanned aerial vehicles have changed the way in which the United States prosecutes its targets. In short, this thesis surmises that the technological advantages of drones to target adversaries causes their use and, in some instances, overuse. Some claim, such as P.W. Singer, the decreased risk to humans and the ease with which a target can be engaged, changes the calculus in deciding when and where to conduct a war-like act. Consequently, the use of unmanned aerial vehicles should be done in accordance with a transparent policy guiding its use. Furthermore, the use of force applied from drones should be consistent with the overall strategies of the United States. This is important to explore because misusing unmanned aerial vehicles, despite their contributions, risks limiting their use in situations dangerous to ground forces and manned aircraft in future engagements.

Leveraging all aspects of national power to protect the security of the United States is a mainstay of the last two presidential administrations. Drones have facilitated an aggressive strategy to target adversaries in austere and under-governed countries without risking the lives of human pilots and without using combat ground forces in some areas. The chapters of this thesis dissect how UAVs have changed the way in which the United States prosecutes its targets as such: (1) is it UAVs that are a problem, or is it the implementation of UAVs that are a problem, (2) can drones be used in places like North

[1] This thesis does not address autonomous systems. When referring to drones, this thesis is talking about remotely piloted unmanned aerial vehicles. The decisions to engage enemy fighters are still made by humans.

Africa in lieu of ground forces, and (3) are drones better suited for counterinsurgency (COIN) or counterterrorism (CT) operations.

These three topics were chosen to compliment one another in the following manner. The evidence suggests UAVs are a natural progression of a technologically superior military, and the responsible party for any wrongdoing is from the humans operating the UAV; therefore, a transparent policy should guide its use to ensure the reputation of UAVs is not completely negative. In other words, if drones are being used in accordance with a transparent policy guiding their use, and drones are still being misused, it may be easier to hold a human responsible for their misuse, rather than placing blame on a UAV. As drone technology proliferates and UAVs become increasingly relied upon, exploring their use in lieu of ground forces in places like North Africa is an appropriate next step. Concluding that UAVs will not completely replace the importance of human engagement on the ground, determining the role of UAVs in counterinsurgency and counterterrorism operations (arguably the two primary military operations being conducted at the time of this writing) is a logical next step for the final chapter. The last chapter reiterates earlier arguments that a clear mission must be identified in order to ensure the effective military utility of UAVs. A clear mission, coupled with a transparent policy guiding the use of UAVs, provides appropriate guidelines for the use of force in achieving the strategic objectives of the United States, and preserving the reputation of drones as an invaluable asset instead of a liability fueling an insurgency or increasing the ranks of a terrorist organization.

Chapter One challenges the negative connotations of UAVs and argues for a transparent policy to guide their use. The chapter addresses the question, is it UAVs that

are a problem, or is it the implementation of UAVs that are a problem? The evidence suggests that it is the implementation that is a problem, and not the UAVs themselves. UAVs are simply a tool in a toolbox. Furthermore, this chapter establishes UAVs as a natural progression in a technologically superior military and argues for a more transparent policy to guide the use of drones, and more specifically armed drones. A case study of armed drones in Yemen was chosen to explore their role outside the traditional battlefields of Iraq and Afghanistan. Supported with empirical evidence of drones being used since the early to mid- Twentieth century, the case study also reviews the targeting of Anwar al-Awlaki. Yemen is the host to numerous drone strikes and the targeting of an American citizen, which is what makes this case study so appropriate.

A secondary question posed is whether the use of UAVs is defining the warfare strategy, or vice versa. In other words, are the goals of a conflict based on the potential to achieve them via UAVs? This chapter argues that United States policy should instead define the strategy (which may or may not include some usage of UAVs, depending on the circumstances). The central argument behind UAVs defining the strategy is because drones make it easier to conduct war-like acts. Removing the risk to a human has changed the calculus in deciding how and when the use of force is applied. This is important to review because, for the most part, it is here where drones begin to receive their notoriety. The essence of the argument is, just because a target can be attacked, does not mean the target should be attacked. Therefore, it stands to reason that drones, a natural progression of a technologically superior military, require a transparent policy to ensure their use is consistent with the goals of the United States and that the weapon

system is a tool with which to use in, but not guide, the strategy in pursuing the adversaries of the United States.

Chapter Two explores if unmanned aerial vehicles can be used in places like North Africa in lieu of ground forces. A case study on Mali was contrasted with military operations in Somalia and Libya to examine the role of unmanned systems and ground forces. The evidence suggests that despite the proliferation of UAV use, and although UAVs have their utility in Africa, they are still no substitute for human engagement in certain circumstances.[2] North Africa was chosen because at the time of this writing the United States was providing French and Malian forces with unarmed UAV support to combat al-Qaeda in the Lands of the Islamic Maghreb, among others, from gaining control of Northern Mali. Although UAV support in Mali seemed to be an ideal level of support at the time, and despite the seemingly limitless potential for drones in the vast and open North African deserts, they do not appear to be able take the place of ground forces. In order to effect real change in Africa, it is argued that African countries themselves will have to be better trained and prepared to prevent nefarious groups from entering their sovereign countries in the first place. This level of support requires a focused and deliberate strategic plan. Nevertheless, when it comes to combating terrorist groups that are already present, drones provide the United States the ability to do so without risking the lives of its service members.

By contrast, as the numerous missions in Africa have shown - such as withdrawal of United States Navy SEALs in an attempted amphibious landing in Somalia, and the

[2] This is not to imply an argument that drones will take over all military operations, but rather to highlight that drones have to be part of an overall operational picture. However, as discussed in subsequent sections, some make the argument that drones are the only means available to target individuals in hard to reach places.

successful capture of a Libyan militant in Tripoli - there is no substitute for boots on the ground when the target or the environment is not conducive to a drone strike. To be sure, the same can be said for the use of unmanned aerial vehicles in Pakistan. Government officials have claimed drones are the only successful method to attack targets in Pakistan, yet ground forces were used to target Osama bin Laden. Despite the technical prowess of drones, the evidence suggests ground forces are still looked upon as an essential element in conducting military missions.

Chapter Three addresses if unmanned aerial vehicles can support both counterinsurgency and counterterrorism operations. As some conflate the meaning of these two disparate terms, drone use seems to be held culpable for making it difficult to achieve success of one type of mission while trying to achieve success in the other. A case study of drone strikes in Pakistan is contrasted with their use in supporting missions in Yemen and Afghanistan. These were chosen because of the complex nature in identifying the most applicable approach to defeating adversaries in these countries. Afghanistan presents a fairly clear counterinsurgency mission; Yemen is the host of an aggressive counterterrorism strategy; while, the case in Pakistan seems to be more fitting of a counterterrorism approach, yet criticized for things more befitting of a counterinsurgency strategy. Regardless, the evidence reviewed in this chapter proposes drones can support either mission, as long as the mission is clear and unambiguous enough to ensure the use of force is consistent with the strategic objectives of the war. In other words, UAVs can be used to support either type of mission, but the role of the UAV has to be consistent with the principles the overall mission is trying to achieve.

Drones facilitate the ease with which a target can be engaged. For that reason it is important to understand under what type of mission a particular target is being engaged – COIN or CT. A potential target under COIN operations may need more fidelity on the exact individual and require a study of the second and third order effects before being engaged. By contrast, under a CT mission, target fidelity may not be as important provided the physical descriptions are consistent with nefarious activity. This is important to explore because the effects of one mission may be counterproductive to the goals of the other mission.

Just as improvised explosive devices (IEDs) are an asymmetric method of warfare from an adversary with a dearth of traditional "resource power," drones are an asymmetric method of exploiting an enemy's weakness in aerial defense.[3] On the other hand, Andrew Mack cautions against thinking industrial power alone facilitates inevitable victory. Mack posits, "in essence, the actor with the most resolve wins, regardless of material power resources."[4] Although unmanned aerial vehicles provide a marked advantage on the battlefield, their short-term gains may have long-term costs if not applied appropriately. In other words, drones may be looked upon as a method to engage a target because of the ease with which a target can be attacked, but if their use perpetuates conflict, their benefits may be counterproductive. Furthermore, if drones carry the burden of being heavily criticized for collateral damage and an invasion of civil rights or state sovereignty, that could negatively impact the resolve to prosecute the

[3] Andrew Mack. "Why big nations lose small wars: The politics of asymmetric conflict." World Politics 27, no. 02 (1975): 182.
[4] Arreguin-Toft, Ivan. "How the weak win wars: A theory of asymmetric conflict." International Security 26, no. 1 (2001): 95.

enemies of the United States seeking refuge in under-governed safe havens. To that end, ensuring drones are used smartly can secure their use in future engagements.

Chapter One

It Takes More Than a Joystick

Introduction

The landscape of the battlefield has changed significantly in the last decade. Transformations can be seen across the services from military uniforms to the frequency and method of communication with loved ones back home. Perhaps the most drastic changes can be seen with the weapons used. Unmanned aerial vehicles are a symbol of the technological advancements on the battlefield to support ground forces, and a symbol of the lurking American presence for those on the run. As the United States continues retrograde operations in Afghanistan, many Americans look forward to the safe return of the American forces; there should also be support for the role drones played in the war. This is important because drones will likely play a significant part in the future of military operations – on the battlefield and in humanitarian assistance. Leaving Afghanistan with drones burdened with a negative connotation, may present challenges in their use in future engagements.

This chapter seeks to explore if it is the UAV that is the problem, or if the implementation of UAVs is the problem. Drones have undoubtedly changed the way the United States prosecutes its targets. They provide decision makers with an unprecedented range of options, from providing real-time footage of an objective, to providing hours upon hours of close air support for ground troops, and perhaps most controversially, to attacking targets in sovereign nations – all while removing the risk to a human pilot. Critics of drones make some compelling arguments, but further research is

needed to differentiate between conjecture and key analytic judgments based on evidence. The arguments against their use range from being less than honorable, to fueling an insurgency. Rand Paul even goes as far as arguing they could be used to target Americans in the United States.[5] This claim however was abruptly refuted by the Obama Administration in a letter to the Senator stating drones would not be used to kill Americans within the United States.[6] Ultimately, this is a policy question on how drones should be used and not necessarily an attack on the unmanned technology. The argument ought to be to define a policy guiding the use of drones – not that drones make it too easy to conduct acts of war or violate basic human rights. Unmanned aerial vehicles may be the lynch pin to success in key humanitarian missions, as well as dangerous missions covering chemical and biological warfare, and therefore it is essential to ensure their reputation remains intact, as free of negative connotations as possible. This chapter attempts to counter the negative arguments against drones and if the theory is true, it expects to support their evolution as a necessary implement of a technologically superior military.

While many speak of drones with condescending undertones, this chapter argues to embrace the role of unmanned aerial systems.[7] The uses of drones for humanitarian missions are not as eagerly contested as they are in a combat role. The only issues seem to arise when drones are loaded with weapons to kill an enemy. On the other hand, that is the very crux of the opponent's argument – too many are killed when a drone strikes.

[5] Jeremy Herb and Justin Sink. "Obama faces turning point on administration drone policy," The Hill, March 8, 2013.
[6] Ibid.
[7] Unmanned Aerial Systems generally refer to multiple aircraft, a ground control station, a satellite link, spare equipment, and personnel to maintain and operate the aircraft.

There is some validity to that argument, but it is not the drones, it is the policy allowing the use of the drones.

In order to understand how the use of drone strikes incites such objections, the relationship between the cause and effect variables must be looked at more closely. In other words, the overuse of drones precipitates a bad reputation by targeting terrorist suspects at all levels of hierarchy and in sovereign nations outside traditional battlefields. The independent variable is the use of drones in armed combat engaging an enemy target, while the explanatory variable is the bad reputation drones receive, as well as questions on the legality of their use. The causal relationship between its use and its reputation is explored in greater detail in the following pages.

This chapter is divided into four sections. First, the literature review examines the pros and cons of drones as presented in the current literature and begins to explore the causal relationship of drone use and its level of support for use. Second, to highlight recent successes and implications of drone activity, a case study reveals the nuances of their use - their application in Yemen. Additionally, the case study includes empirical evidence supporting the claim that the use of drones is a natural progression in the development of military technology and therefore should take its place as a legitimate tool in the arsenal of the military capabilities. Third, the analysis section provides a thorough review of the critical comments and reflects on the natural progression of the drones into the battlefield. Lastly, this chapter concludes with a summary of the points made and questions to guide further research.

Literature Review

Generally speaking, unmanned aerial vehicles are multi-mission, multi-purpose vehicles, uninhibited by fatigue, or other limiting human factors. They have been used since the mid- to late twentieth century, although their use has proliferated significantly since 2001. While they possess many capabilities and provide many benefits, they also provide a layer of protection to humans clouded with mismanagement and overuse. This layer of protection has the potential to manifest itself in choosing to use a drone since the risk to a pilot is removed.[8] As explained in current literature, the simple fact of reducing the risk to human life may not be worth the liberties the United States takes when using an unmanned aerial vehicle to target a suspect. On the other hand, there are many supporters of drones as they provide the ability to pursue targets seeking refuge in austere and dangerous environments.

Against the Drone Or For the Drone

The application of armed drone use is what really seems to fuel the distaste for drones. The targeted killings are even referred to as extrajudicial or assassinations. Philip Alston, of the United Nations, raised serious concerns over the use of drone strikes and challenged the legality of the United States' drone program after an accidental attack killed twenty-three civilians.[9] Andrew Exum and Medea Benjamin go as far as asserting UAVs are immoral, and question the honorable nature of drones. However that language is not nearly as strong when manned fixed-wing aircraft are used to drop bombs two, three, or even four times the size of the precision guided AGM-114 Hellfire missiles used

[8] Daniel Brunstetter and Megan Braun. "The Implications of Drones on the Just War Tradition." Ethics & International Affairs 25, no. 03 (2011): 337.
[9] Brunstetter and Braun, 341.

by the Predator and its larger version, the Reaper.[10] Further inciting angst, is the targeting of suspected terrorists outside traditional battlefields in sovereign nations, such as Pakistan, Yemen, and Somalia; however, the United States government maintains their use is only when endorsed by the host government.[11] A central theme of the argument against drones outside battlefields can be seen in Rand Paul's leap to assert the proliferation of drone use will know no boundaries and, therefore, target American citizens on United States' soil.[12] The issue for many is that drones, because of their ease of use, are used too frequently abroad and cause too many civilian casualties. The argument is essentially that, due to their frequent use, drones are claiming too many innocent lives, which in a war of insurgents drives more toward the insurgency.[13] As the number of insurgents increase, the number of drone strikes increase. This self-perpetuating vicious cycle has no end in sight as each of the newly joined insurgents is targeted under the Authorization for Use of Military Force (AUMF).[14]

Questioning the morality or claiming drones are a less than honorable way to fight is an intriguing position. Exum and Benjamin argue against the merits of even using drones. Exum, whose argument rests on the theory that collateral damage is the catalyst that causes many uncommitted to join an insurgency, opines from a "classical" perspective that unmanned aerial vehicles are not an honorable way to fight.[15] A frequent co-author of his, Kilcullen takes this a step further and posits they are "counterproductive

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[10] U.S. Air Force, Fact Sheets, http://www.af.mil/information/factsheets/index.asp, accessed 4 March 2013.
[11] David Sanger. *Confront and Conceal: Obama's Secret Wars and Surprising Use of American Power*. Broadway, 2012, 258.
[12] Herb and Sink. "Obama faces turning point on administration drone policy."
[13] Jane Mayer. "The predator war." The New Yorker 85 (2009).
[14] The Authorization for Use of Military Force was passed in the weeks after the attacks against the United States on September 11, 2001. It provides the authorization to target those responsible for the attacks. (Con., 107th, 2001, S. J. RES. 23.). The definition of the adversary as an insurgent is explored in greater detail in Chapter Three.
[15] Jane Mayer. "The predator war."

because they stoke anger against the United States."[16] In developing a counterinsurgency strategy the misuse of any weapon system will have debilitating effects. Whether or not the use of a weapon system is honorable, is an argument not taken by too many. Benjamin on the other hand, as a peace activist, projects much of her disdain against the wars and the collateral damage caused by drones. Unlike Exum and Kilcullen, her argument is not to build a stronger more effective counterinsurgency, but rather to engage the enemy with dialogue and diplomacy.[17] However, she lends credence to Exum's questioning the honorable nature of drones by emphasizing the honorable nature of Pashtun fighters.

To further complicate the use of drones, some argue the reduced risk to humans has changed the calculus in deciding when to strike a target. This is Brunstetter and Braun's argument of "*jus in bello"* meaning just because they can be targeted, does not justify the act.[18] While opponents argue the legalities of targeting outside a battlefield, and in some instances an American citizen, Diederik Kolff argues, "For as long as one is willing to define Al-Qaeda as trained combatants that have declared war against the United States, they are legitimate targets in this global war against terrorism."[19] In contrast, Mary Ellen O'Connell, however, balances her position in supporting the use of drone strikes in a combat zone, but not in areas outside a defined battlefield. Her position is that since war was not declared on the host nation, and using armed drones to attack a target constitutes "military force," these forms of attack can be interpreted as

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[16] Peter Bergen and Katherine Tiedemann. "Washington's Phantom War: The Effects of the US Drone Programs in Pakistan." Foreign Aff. 90 (2011): 14.
[17] Medea Benjamin. "Drone warfare: Killing by remote control." (2012), 201.
[18] Brunstetter and Braun, 337.
[19] Diederik Kolff. 2003. "'Missile Strike Carried Out With Yemeni Cooperation'--Using UCAVs to Kill Alleged Terrorists: A Professional Approach to the Normative Bases of Military Ethics." Journal Of Military Ethics 2, no. 3: 243.

"extrajudicial killings."[20] This position is ostensibly so as not to impose on the sovereignty of the host nation and to contain the use of force – not just the use armed drones.

Technological Advancements

Drones provide a way to surgically enter a sovereign nation and attack al-Qaeda seeking refuge without sending in an armed ground force, a far more overt form of military force. As the arguments mount against drones citing their influence in the expansion of the AUMF, it is important to remember that technological advancements have secured the United States' position as a global superpower. While many may not have been able to project exactly the extent of their impact, UAVs have been a part of future plans for decades.

These types of technological advancements in weapons systems and military vehicles can be seen throughout history. Kolff makes his argument supporting the use of UAVs. Kolff asserts that while drone use could benefit from political oversight, drones should continue to be used in military engagements.[21] He further argues, "rightfully or wrongfully, a series of significant military innovations have facilitated and upheld Western global dominance since the fifteenth century."[22] While Kolff favors the continued use of drones, he does so with a hint of caution not to overuse drones simply because it is easy. This is similar to Glade's complimentary projection in how UAVs should be brought into the military arsenal. Specifically, Kolff focuses on weapons

[20] House Subcommittee on National Security and Foreign Affairs, *Rise of Drones II: Examining the Legality of Unmanned Targeting*, 111th Cong., 2nd sess., 2010, 20.
[21] Kolff, 243.
[22] Ibid., 241.

systems technologies, such as "bronze gunpowder artillery" and "thermonuclear weapons," and vehicles, such as submarines and aircraft.[23] All of these have played in important role in overwhelming enemy forces to defeat. Kolff states, "military innovations formed a change in combat that created a serious disadvantage for those armed forces that did not adopt them."[24] However, there is an element of caution in applying the use of force, albeit from a technologically superior military, because, in the words of Andrew Mack, "not only does superiority in military force not guarantee victory; it may, under certain circumstances, be positively counter-productive."[25] In other words, just because drones offer a tactical advantage, if used incorrectly, they have the potential to be a liability. As the United States continues to develop its weapons systems to fight an increasingly difficult enemy to fight with conventional forces, unconventional methods should be leveraged to secure victory. Drones have the ability to provide this capability if used properly.

Glade, in his July 2000 report on unmanned aerial vehicles, offers his perspective of the inevitable use of drones in the coming years. His timely insight on how UAVs might be used and their benefits in future conflicts is rather consistent with the arguments taken today. Unmanned aerial vehicles, for obvious reasons, do save the lives of pilots and should be used for the more dangerous missions. Dangerous missions could mean physical danger to the aircraft or politically as well. Brunstetter and Braun state, "drones can serve as a coercive measure short of full-scale war."[26] This very line of thinking

[23] Kolff, 243.
[24] Ibid.
[25] Mack. "Why big nations lose small wars…," 177.
[26] Brunstetter and Braun, 339.

precipitates the use of drones in sovereign nations such as Yemen and Pakistan, to some extent.

However, Glade, as well as Brunstetter and Braun, caution that the absence of a human to make the last minute judgment call to avoid collateral damage is a pitfall of drones. Glade argues from the pilot's perspective without a human there to hear and see what is going on in and around the aircraft, effects can be lost on a remote pilot that may alter the judgment of engaging a target. Brunstetter and Braun make a similar claim indicating that the physical distance between the pilot and the aircraft could lend to erroneously engaging targets because of their lack of "accompanying situational awareness."[27] These arguments are certainly compelling enough to demand attention, but alone, will not likely cause significant change to drone policies. Given the high resolution and advanced surveillance equipment in drones, it would be difficult to contend that a pilot at elevation and speed can make a better determination of the ground situation.

Drone Policies and War-like Acts

Micah Zenko is one of those making the case for a stronger and more transparent drone policy. A change in policy or even to declare what is the policy would likely assuage the concerns of many, but the lack of transparency has scholars, such as Zenko and Banks, among others, calling for a reformed policy. Zenko outlines his policy objectives in his *Reforming U.S. Drone Strike Policies.*[28] Among his recommendations for adjusting policies guiding the use of drones is that the President should restrict the use

[27] Brunstetter and Braun, 347.
[28] Micah Zenko. "Reforming U.S. Drone Strike Policies." (Council on Foreign Relations, 2013).

of drone strikes to only al-Qaeda senior leadership or individuals known to be part of an operation against the United States or its allies, that Congress should be briefed more on the role of drones to ensure they are aligned with foreign policy objectives, and that the United States should play a larger role in outreach to other nations aspiring to build drones to share best practices and establish a safe proliferation of unmanned technology.[29] Ensuring greater oversight by elected officials may very well have its advantages to saving the reputation of drones, but too much bureaucracy could slow the program down and marginalize its effectiveness.

While acknowledging the need for a stated policy, and sensitive to the amount of time it would take to approve each case, Banks argues for a policy to guide the desired end-state. He states, "Congress should better articulate the policy objectives we are trying to achieve, it's not possible for Congress to deliberate about every individual drone strike, but they should set policy for what we seek to achieve in using force."[30] This is consistent with Zenko's recommendation for increased oversight to ensure foreign policy milestones are not hampered by the use of drone strikes - or misuse, as they would assert.

Like Brunstetter and Braun, Kolff tackles the "Just War" theory. The theory explores *jus ad bellum* (right to start a war), and *jus in bello* (rights in war).[31] These dynamics are important to the discussion of UAVs because they provide the distinction between the use of UAVs in war and going to war because it is possible. Kolff highlights that the use of unmanned aerial vehicles provides an opportunity to make war-like acts, such as targeting an individual, without actually going to war. This means that if the objective of the aggressor is to kill an individual, this can be accomplished without

[29] Zenko, 26.
[30] Anna Stolley Persky. "Lethal Force," Washington Lawyer, March 2012, 29.
[31] Kolff, 241.

having to invade a country with ground forces. Although, opponents, like O'Connell, argue that the use of drones in any sovereign nation, without its consent, is an affront to its sovereignty and therefore an act of war. However, Kolff argues, "weapon platforms themselves do not bring ethical dilemmas, their use does."[32] The drone is simply the delivery vehicle, or the instrument of a government pursuing its enemies, regardless of their location. The hazard in this theory is succinctly described by Kolff, "the danger might be a lowered threshold that is felt by the leadership, as they will send machines to war, not humans."[33] The implication being that political leaders will be more likely to use lethal force as the risks of losing a human are removed and an overuse of this policy will prove to undermine its effectiveness.

The existing literature makes strong claims that the current drone policy, or lack thereof, cannot continue on its current course. Change must occur to both safeguard the future use of this innovative weapon system and to prevent the United States from engaging one target after the next with no end in sight, and each with diminishing returns.

This is a relative constant among the arguments thus far. Bergen and Tiedemann present the most lucid argument for a revised drone policy, while Zenko presents the most comprehensive set of recommendations for a policy. Mayer takes the argument a bit further by endorsing an argument that asserts drone strikes are less than honorable. Whether or not these policies need the revision some call for, like Mayer and Zenko, they are having a significant impact on both sides of the battlefield. On the other hand, Brunstetter and Braun set out to determine if that impact is "just." They proclaim,

[32] Kolff, 243.
[33] Ibid., 244.

because something can be done, does not mean it should be done, which is seemingly taking the side of Mayer by questioning the morality of drone strikes.

Mayer, Bergen and Tiedemann, and Zenko each offers an acknowledgment of the effects drones are having on the enemy – a far more measurable effect. The enemy is adapting its tactics, techniques, and procedures to avoid detection of these lurking icons of technological superiority. This impact should not be over looked, nor underplayed. As former Defense Secretary Leon Panetta stated of drones, "it's the only game in town."[34] Contrary to what Brunstetter and Braun argue, in this case, because drones can be used to target, they should.

On the other hand, Singer cautions readers that American technological superiority alone will not win the war in Afghanistan.[35] His references come from a number of military officers that question the optimism on the role of the UAV. Therein lies the issue. The role of the UAV should not, much like any other single weapon system, be to win the war by itself. It should be an implement of war, not a means to an end. Singer spares no page claiming the successes of IEDs, a rudimentary technology comparatively speaking, are having on coalition forces. If anything, that reason alone should support taking to the sky. As night vision devices provide a marked advantage over an enemy, so too do UAVs. And as such UAVs should play an integral role in tactical mission planning. Night vision devices do not win wars, nor do UAVs; they provide an advantage to winning battles set forth to achieve strategic objectives.

An opponent to the current application of drones, Singer further argues that the calculus has changed. He asserts since we no longer have mechanisms in place that

[34] Bergen, 12.
[35] Peter Singer. "Wired for war: The robotics revolution and conflict in the 21st Century." (2011): 214.

stretch the sacrifices of war over the entire population, such as a draft, war bonds, and war taxes, and since we do not declare war, drones provide the United States the opportunity to conduct attacks that would seemingly be acts of war, with little to no recourse.[36] The decisions to wage war and attack a target are no longer subject to heavy scrutiny when the risk to humans is removed from the equation. Persky takes this one step further and states, "war has become so easy that we no longer understand when we are conducting a war-like maneuver."[37] These are serious concerns when considering the current, and previous, administration's application of the AUMF. Without the constraints of geography and time, drones present a dangerous proposition to government leaders pursuing those responsible for the attacks against the United States.

The arguments presented in this section explore the causal relationship of going to war, or conducting war-like attacks, because drones make it easy. Drones are a natural progression of the military and its guiding policies should provide the necessary constraints of its application. For while the current successes of drones on the battlefield in defeating an enemy and degrading their freedom of movement is highly regarded, they have also experienced criticism for their collateral damage. More evidence is needed to fully understand the correlation between the use of drones and its impact on the insurgency; both in terms of degrading an insurgent's network and on the ability for an insurgency to recruit.[38]

[36] Persky, 24.
[37] Ibid., 25.
[38] Chapter Three addresses in greater detail the relationship between drone strikes and insurgent recruiting. The Chapter also addresses the difference in counterinsurgency and counterterrorism operations.

Case Study

The specific case study that provides context to this argument is the use of drones in targeting Anwar al-Awlaki in Yemen. This case represents its own set of issues and complexities that highlight the reliance on technology to prosecute targets because of the ease with which these unmanned aerial vehicles provide. A sovereign nation outside the traditional battlefields of Iraq and Afghanistan, Yemen was chosen because of its unique characteristics – it has been host to numerous drone strikes and the targeting of an American citizen. These two characteristics make the comparison so appropriate. Many opponents to the use of drones cite examples of extrajudicial killings and that drones make it easy to kill, even if the targets are American. It is thus here, where drones may have started to receive much of their notoriety. There are authors, such as Benjamin, who detest their use in any part of the globe, but many cite fueling an insurgency in Pakistan and the extrajudicial killings in Somalia and Yemen as the crux of their argument. There is even more talk about their use in Pakistan, but given the geographical relationship to Afghanistan, Pakistan will be discussed in greater detail in subsequent sections and Chapter Three.

In pursuit of those responsible for the attacks against the United States in 2001, Congress provided the Authorization for Use of Military Force in the following days. Under these auspices, the president is privileged to "use all necessary and appropriate force" against anyone providing a role in the acts, safe haven, or any level of support to al-Qaeda.[39] With no limitations to time and distance, the United States seeks justice for those who took part in attacking the United States. From 2001 until the time of this

[39] Con., 107th, 2001, S. J. RES. 23.

writing, Yemen has been the host to nearly 104 airstrikes.[40] These attacks have inspired two distinct arguments as a result - conducting an attack in a sovereign nation outside the traditional battlefield, and targeting an American. While this thesis does not get into the details of targeting an American citizen, as that is another topic in and of itself, it would be negligent not to address its importance as it relates to the use of drones. Targeting an American citizen in any fashion, manned or unmanned aerial vehicle or through the use of direct action, has much more to do with violating constitutionally protected civil rights afforded to the citizens of the United States than it does with the application of drones. In other words, there is no correlation between the constitutionality of targeting an American and drone use.

Targeting al-Qaeda in Yemen

As those responsible for the attacks against the United States sought refuge, the United States followed. After losing much of their sanctuary in Afghanistan in 2001, Yemen became a place of refuge for al-Qaeda.[41] In November 2002, a Predator drone targeted Qaed Salim Sinyan, among other al-Qaeda members. Sinyan was a key facilitator in the USS Cole bombing and a close ally of Osama bin Laden.[42] In lieu of exposing ground forces to the risk of combat, and occupying another country, drones became a candidate for conducting attacks.

Most notably is the case against Anwar al-Awlaki. Awlaki was an American citizen and senior al-Qaeda member. In September 2011, Awlaki was the subject of a

[40] Long War Journal, http://www.longwarjournal.org/multimedia/Yemen/code/Yemen-strike.php, last updated October 15, 2014, accessed on October 20, 2014.
[41] James Hasik. Arms and Innovation: Entrepreneurship and Alliances in the Twenty-first Century Defense Industry. University of Chicago Press, 2008, 32.
[42] Ibid., 32.

drone strike, which killed him and several others, including another American.[43] The immediate backlash from the targeting and killing of an American put the United States Government on the defensive. The Defense Department took the position claiming, "belligerents who happen to be U.S. citizens do not enjoy immunity where non-citizen belligerents are valid military objectives."[44] The fact that al-Awlaki was killed without a trial is what causes many civil rights groups to challenge the legality of the attack. They claim his fifth and fourteenth amendments were directly violated and he should have had a trial.[45] In response former Attorney General Holder states, "a careful and thorough executive branch review of the facts in a case amounts to due process."[46] Holder's claim at least indicates support of providing some level of due process. On the other hand, it appears the State Department is content on denying due process because it appears they view Awlaki only as a terrorist. The State Department's former senior attorney, Harold Koh, argues, terrorists are not obliged a legal process prior to lethal force.[47] Even still, Senators Rand Paul and Jeff Sessions are not convinced. Post Rand Paul's filibuster in early March 2013, they maintain the President does not have the ability to deprive an American, albeit an al-Qaeda operative, due process.[48]

Opponents of the use of drones in other countries adjust their argument to make it sound as if drones took off from Nevada and flew into the airspace of a sovereign nation, killed its inhabitants, and reported back home with impunity. Indeed, as Waxman asserts,

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[43] Mark Mazzetti, Eric Schmitt, and Robert Worth. "Two-Year Manhunt Led to Killing of Awlaki in Yemen," The New York Times, September 30, 2011.
[44] Charlie Savage. "Pentagon Says U.S. Citizens with Terrorism tie can be targeted," The New York Times, February 22, 2012.
[45] Peter Finn and Sari Horwitz, "Holder Says U.S. has Right to Kill Terrorist Citizens Abroad," The Washington Post, March 6, 2012.
[46] Finn and Horwitz, "Holder Says U.S. has Right to Kill Terrorist Citizens Abroad."
[47] Sanger. "*Confront and Conceal*," 256.
[48] Herb and Sink. "Obama faces turning point on administration drone policy."

over the years, and two different administrations, the United States has been in a war with al-Qaeda, with no boundaries.[49] In this case, the drones were coming from a small group of coalition forces located in Djibouti to attack targets across the Gulf of Aden in Yemen.[50] The small group of forces there forms the base of operations to target al-Qaeda in the area. As the Yemeni government finds itself in constant struggle with terrorists, namely al-Qaeda, a partnership has been formed to target the aggressors of the both states. Although, not confirmed, Hasik hints at the witting complicity of the Yemeni government.[51]

Coming under immense scrutiny of targeting an American citizen, former Attorney General Holder argues the justification of the use of drones. He states, "whether the capture of a U.S.-citizen terrorist is feasible is a fact-specific, and potentially time-sensitive, question."[52] Once Awlaki was confirmed in a specific location, the window to target him was likely only minutes. Armed with state-of-art surveillance equipment and Hellfire missiles, with an ability to travel hundreds of miles while providing an element of surprise, drones were a likely choice in prosecuting Awlaki as a target. The target was justifiable in the eyes of the United States, and the weapon of choice was within the construct of law-of-war principles, as described by Holder.[53] The alternatives would be to use a manned aircraft, placing risk to a pilot; using armed forces, placing risk to soldiers on the ground engaging in armed combat; or letting him go, placing greater risk to Americans abroad or in the United States. Drones

[49] Persky, 28.
[50] Hasik, 33.
[51] Ibid., 32; and Chapter Three discusses more of the complicit nature of Yemen's government in supporting drone strikes.
[52] Finn and Horwitz, "Holder Says…."
[53] Ibid.

were able to achieve success while eliminating risk to humans in combat. Whether or not one agrees with targeting an American terrorist or flying the mission in a sovereign land, the unmanned aerial vehicle provided the safest way to eliminate the threat to the United States - an aim the current presidential administration seems to have a penchant to leverage.

According to the Long War Journal, the drone strike in 2002 was the only one recorded until 2009.[54] Indeed there is a significant increase in drone strikes since the Obama administration took office. Drone strikes have increased five fold in some instances. There are potentially numerous attributable factors for this increase such as surge in coalition forces, a greater number of targets either through decreased operational security by terrorists or increased vigilance by Coalition forces, or an increased desire to reduce the risk to manned operations. Regardless, what is for certain is that the use of drones does not seem to be going away.

Evolution of Drone Technology

Controversy aside, drones have changed the landscape of the battlefield. The long duration of drones conducting surveillance operations avoids the complications of previous state-of-the-art aircraft such as the U-2.[55] This capability coupled with an attack mode makes drones an all-in-one aircraft, ready for any situation. These technological advancements are not uncommon to the United States military, but rather a natural progression in the advancement of weapons systems.

[54] Long War Journal, http://www.longwarjournal.org/multimedia/Yemen/code/Yemen-strike.php, last updated 23 January 2013, accessed on 20 March 2013.
[55] Singer, 36.

In fact the military is always seeking innovative ways to secure its global dominance. While developing ways to expand the capabilities of United States Army attack aviation, in 1998 Lieutenant Colonel (LTC) Madden wrote on developing an "Army Aviation Strike Force."[56] LTC Madden's plan centered on providing leadership with a more comprehensive set of solutions to highly complex threats around the world. In doing so it meant creating a strike force with specific capabilities. Much like can be seen in the current UAV systems today, LTC Madden focused on two distinct capabilities - attack and reconnaissance.

In his plan, LTC Madden wanted to increase the lethality of the AH-64 Apache by increasing its survivability in inclement weather and developing a self-sufficient weapon system. A more sophisticated radar system provides better protection against threats, such as enemy fire and inclement weather. Developing the AGM-114 Hellfire missile into a "fire-and-forget" missile means the aircraft can launch a missile and immediately seek cover, thereby protecting itself from retaliatory fire.[57] Advanced radars coupled with a more tactically oriented missile, increases the lethality and survivability of an aircraft exponentially - manned or unmanned.

The Apache's reconnaissance partner, the RAH-66 Stealth Warrior, was upgraded with target acquisition, "near-real time" observation of the battlefield, and communications equipment.[58] These upgrades made it the perfect complement for the Apache and particularly, with the observation of the battlefield, ground forces. But Madden's picture of the perfect aviation strike force did not stop here. Unmanned Aerial

[56] Craig Madden. *Army Aviation Strike Force: A New Strategic Asset for the 21st Century*. Army War College, 1998, 1.
[57] Madden, 6.
[58] Ibid., 10.

Vehicles, or as he called them Tactical Unmanned Aerial Vehicles, play an integral role as well.[59] These UAVs were designed to provide tactical commanders on the ground with "near-real-time" footage of an environment.[60] A ground force commander could rely on the UAV to provide an assessment of the terrain, enemy forces, or weather a few hundred kilometers away - certainly an invaluable asset at the time. Unmanned Aerial Vehicles, as a described by LTC Madden, also provide the "aviation strike force" information about targets. At the time UAVs were not armed, so they would only relay information about enemy forces back to the strike force.

While the two aircraft systems (AH-64 and RAH-66) operate with upgraded sensors, radars, and weapons systems, they worked in teams, each aircraft complimenting the capabilities of the other, and with even more information from the UAV. While their technological advancements had profound impacts on the battlefields in subsequent engagements, and were marked improvements from previous versions, today's unmanned aerial vehicles have these same capabilities on one aircraft. The argument here is not to say that drones are better than rotary-winged aircraft, but rather to highlight that the necessary features of an "aviation strike force," designed to provide decision makers more options when confronting an enemy, are now on one aircraft.

Today's UAVs can be equipped with state-of-the-art observation devices and weapons. For example, the MQ-1B Predator and the larger MQ-9 Reaper, each have a number of sensors, communications equipment, and highly accurate weapons.[61] Whereas LTC Madden's vision for UAVs was to provide reconnaissance support to the primary attack (AH-64) and observation (RAH-66) helicopters, today's UAVs are "armed, multi-

[59] Madden, 14.
[60] Ibid.
[61] U.S. Air Force, Fact Sheets, accessed 1 March 2013.

mission, medium-altitude, long endurance remotely piloted aircraft."[62] While each is "uniquely qualified to conduct irregular warfare operations in support of Combatant Commander objectives," the Reaper is primarily designed for "dynamic execution targets," and the Predator is primarily designed as an "intelligence collection asset."[63] Each of these UAVs can carry the AGM-114 Hellfire II missile, while the Reaper can also deliver GBU-12 and GBU-38 Joint Direct Attack Munitions.[64] The AGM-114 missile is a one hundred pound bomb and the GBU-12/38 are five hundred pound bombs; the AGM and GBU possess smart bomb technology designed with precision guidance to lower collateral damage.[65]

Requirement for Multi-Mission Aircraft

LTC Madden's vision of UAVs supporting the "aviation strike force" bore out of a series of guiding documents such as the Joint Vision 2010, the Army Vision 2010, the 1997 National Defense Panel Report, and the 1997 Annual Report on The Army After Next Project.[66] Together these documents call for a, "long-range precision capability... equipped to conduct full spectrum operations... while sharply reducing our logistics footprint."[67] As those were the guiding principals for LTC Madden's pursuit to incorporate UAVs into the fold of attack aviation, these same requirements can be said for today's UAVs. Indeed, the Predator is a product of the Defense Department's requirement "to provide persistent intelligence, surveillance and reconnaissance

[62] U.S. Air Force, Fact Sheets, accessed 1 March 2013.
[63] Ibid.
[64] Ibid; AGM is an Air to Ground Missile and GBU is a Guided Bomb Unit.
[65] Federation of American Scientists, http://www.fas.org/man/dod-101/sys/smart/gbu-12.htm, updated February 1998, accessed 1 March 2013.
[66] Madden, 17.
[67] Ibid.

information combined with a kill capability to the warfighter."[68] In the United States arsenal, the MQ-1 Predator and the MQ-9 Reaper, are the UAVs that meet these requirements by serving as the eyes of the battlefield with the ability to engage targets as necessary. This dual use role of the UAV has perhaps provided much of the notoriety of drones, but it was also in the making years before the wars in Afghanistan and Iraq.

As Glade argues, "a principal reason for the interest in UAVs was the desire to reduce the risk to humans in combat."[69] However, not all UAVs are meant for engaging targets with attack munitions in combat. Sometimes the target can be a damaged nuclear power facility radiating harmful nuclear energy or a wildfire sweeping across a forest floor. In 2011, after the earthquake-induced tsunami that destroyed the Fukushima nuclear power facility, the RQ-4 Global Hawk provided near real-time intelligence, surveillance, and reconnaissance support (ISR).[70] The mission of the Global Hawk is to "provide a broad spectrum of ISR collection capability to support joint combatant forces in worldwide peacetime, contingency and wartime operations."[71] Broad is an understatement, with twenty-eight hours of endurance at high altitudes and equipped with powerful collection capabilities, weather is not likely to impact its mission. With very few factors impacting its mission capabilities, this UAV is an invaluable asset to all types of missions all over the world.

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[68] U.S. Air Force, Fact Sheets, accessed 1 March 2013.
[69] David Glade. Unmanned aerial vehicles: Implications for military operations. AIR UNIV PRESS MAXWELL AFB AL, 2000, 1.
[70] Gary Mortimer, "Japan Reluctant to disclose footage of power plant taken by U.S. drone," http://www.suasnews.com/2011/03/4703/japan-reluctant-to-disclose-footage-of-power-plant-taken-by-u-s-drone/, 19 March 2011, accessed 21 March 2013.
[71] U.S. Air Force, Fact Sheets, accessed 1 March 2013.

Support to Ground Forces

Glade, as well as Brunstetter and Braun, argue that not having a human in the aircraft is a shortcoming of drones because of the lack of situational awareness. In contrast, General Stanley McChrystal argues drones provide force-multiplying situational awareness, albeit incomplete.[72] As the former head of the Joint Special Operations Command, McChrystal prepared his strategy to take down entire networks of enemy fighters - to be successful he would have to do this as simultaneously as possible. That meant he would need more forces, or a more efficient use of the soldiers he had. Drones facilitated that efficiency. He makes the point that because of drones and their ability to provide real-time full motion video on areas around an objective, special operations forces are able to conduct missions with fewer commandos on the ground.[73] Drones took the place of valuable soldiers conducting security operations on a mission, when those soldiers could be conducting a simultaneous capture/kill mission on another target. McChrystal largely applauds the ground-based situational awareness provided by drones claiming it frees up nearly eighty percent of the forces needed to conduct one mission before the use of drones. Even Exum conceded that video links from drones proved "incredibly helpful" in counterinsurgency operations in Iraq in 2007.[74] Speed was an essential element in the surprise attack against enemy fighters, and drones freed up valuable soldiers to conduct missions to attack entire networks of enemy fighters in a very short time span.

[72] Gideon Rose. *Foreign Affairs, March/April (2013),* "Generation Kill," 5.
[73] Ibid.
[74] Christopher Drew, "Drones Are Playing a Growing Role in Afghanistan," The New York Times, February 20, 2010.

Not only have drones had an impact on the way United States forces conduct their operations, adversaries are having to change their tactics as well. Captured by the Taliban in 2008, New York Times reporter David Rohde stated, "the drones [were] a terrifying presence that… unnerved and angered guards."[75] The hazards adversaries faced by knowing they could be taken out at any second by a drone, without even knowing it, caused intense pressure and consequently they have had to change their methods. It impacted the numbers they travel in, and where they sleep.[76] The fact that drone technology allows American commandos to conduct decentralized operations to deconstruct enemy networks simultaneously, and forces enemy fighters out of the comforts of their own terrain, means drones are having an impact – and likely the intended impact from a technologically superior military.

As critics of the drone program lament the use of drones in Pakistan, there is an element of necessity here and Pakistanis seem to benefit. Prior to November 2012 more than 900 improvised explosive devices used by terrorists in Pakistan killed Pakistanis by the thousands.[77] Many of the same targets of the United States, are also targets of the Pakistani government. As the government tries to combat these terrorist networks they would be remiss if they did not appreciate the benefits of the drones despite the potential collateral damage, which is the cause of great consternation. The Prime Minister, in 2008, stated while he may denounce it publicly, he supports the use of drones targeting the right people.[78] Pakistan's former President Zardari takes it a step further by stating,

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[75] Bergen, 16.
[76] Ibid.
[77] Joint IED Defeat Organization, "Cooperative engagement with Pakistan needed to counter IED networks in Afghanistan," December 13, 2012. https://www.jieddo.mil/news_story.aspx?ID=1502, accessed 21 March 2013.
[78] Bergen, 16.

"Kill the seniors. Collateral damage worries you Americans. It does not worry me."[79] While these claims certainly do not provide authorization for collateral damage, given the fact that terrorists kill Pakistanis by the thousands each year, certainly counterbalances the use of force by drones.

Drones have had a significant impact on the enemy, the manner with which coalition forces conduct operations, and the discourse on the legalities of prosecuting the perpetrators of the attacks of September 11, 2001. The non-restrictive application of the AUMF has certainly facilitated the exponential application of drones in combat. However, the evidence suggests that given the American penchant for technological superiority, these plans were in the making long before the pursuit of al-Qaeda.

Analysis

That the government focuses on pursuing its enemies at all costs is a likely consequence of what James C. Scott describes in *Seeing Like a State*. He maintains that while states singularly focus on influencing one result, the unintended consequences will be more difficult to contend with than the original problem.[80] As long as States continue to myopically address one issue, in this case using drones to target al-Qaeda seeking refuge in sovereign nations, a host of secondary issues on the periphery will soon come into focus. In this case it seems to manifest itself into a disdainful position of unmanned aerial vehicles. It is as if drones are autonomously arming themselves and attacking targets without instruction from a human. As the United States focuses on defeating those harboring al-Qaeda at all costs, it must be clear of the consequences while more

[79] Bergen, 16.
[80] James C. Scott, *Seeing Like A State*, (Yale University Press, 1998), 4.

carefully assigning culpability. Nevertheless, drones are having a serious impact on the way the wars have been conducted over the last decade.

When speaking about the change in special operations tactics, McChrystal points to three technological advancements that allowed for the Joint Special Operations Command to dismantle enemy networks with great success. He credits global positioning systems ("GPS"), night-vision equipment, and unmanned aerial vehicles with great successes in enabling special operators to leverage the technology to exploit the weakness of those without it.[81] As McChrystal argues these advancements allowed his forces to always know where they were by using a GPS, with the aide of the drones they knew where the enemy was, and night vision devices allowed them to engage an enemy that could not see them. This sounds more like a recipe for success, at the tactical level, than an immoral or less than honorable code of conduct.

The evidence suggests that there is a need to form a policy covering the use of drones, but does not support that the use of drones is immoral – as Exum implies.[82] The conundrum is this: Drones are used to kill terrorists in remote and austere environments, or when the enemy is seeking refuge in a sovereign nation like Yemen or Pakistan. Drone strikes, as does any use of force, have the potential to kill innocent civilians, and have done so in the past. Therefore drones cause individuals to take up arms that otherwise may not have joined the fight. In theory these new "recruits" would be lower in the hierarchy. Drones are having so much success killing adversaries that low-level operatives are on the list to be targeted – i.e. the senior leadership is already killed. In

[81] Rose, 4.
[82] Mayer, 44.

essence, drones have the potential to keep beating back an adversary at the lowest levels, preventing a strong and influential hierarchy from rising.

As Zenko makes his case for a drone policy, he is careful not to acknowledge too many of the advantages of drones. His argument swiftly moves past the impact drones are having in reducing enemy fighters to discussing the increase in enemy fighters the drones might be causing. Zenko's contention is that there is more "blowback" and therefore, the costs outweigh the benefits.[83] However, as al-Qaeda deploy and refine their use of improvised explosive devices, otherwise referred to as roadside bombs, claiming the lives of thousands, both their intended targets and innocent bystanders, taking to the air with unmanned aerial vehicles reduces the risk to the pilot, and the use of ground forces to achieve similar objectives. When service members climb into a vehicle to travel to a target's location they have several risks. Roadside bombs litter the roads in Afghanistan and Pakistan making the path to the objective more dangerous, for coalition or Pakistani forces, than the objective itself. While the role of drones within the aviation arsenal predates the wars in Iraq and Afghanistan, these wars certainly accelerated their use. Their accelerated use likely grew out of necessity to seek alternatives to attacking al-Qaeda seeking refuge in austere environments, but also as a way to reduce the number of service members on the roads.

Accelerated use only begins to describe the exponential dependence on unmanned aerial vehicles. In Madden's projection of an "aviation strike force," he writes about the 14,000 hours logged in ten years as an impressive feat.[84] In contrast, in August 2011, the United States Air Force touts the one-millionth hour logged throughout the Predator's

[83] Zenko, 10.
[84] Madden, 14.

lifecycle.[85] Without question UAVs play a significant role in the way in which the United States prosecutes its targets.

Taking to the Sky

While Exum's position on drone strikes being counterproductive may require further research, stating they are not honorable is reckless and irresponsible. Leveraging technology to fight an enemy that has taken to guerilla tactics of dressing like civilians and hiding roadside bombs, which claim the lives of service members with all too much frequency, is a matter of self-preservation and inevitable advancement of a leading nation. Indeed in 2012, IEDs caused more than nineteen hundred casualties among United States service members.[86] Reducing or even removing risk to service members ought to be a mainstay of senior military officials – not described as less than honorable practices.

Benjamin continues the argument of claiming drones are less than honorable, by contrasting what Pakistanis consider an honorable way of fighting. A staunch opponent to the use of drones, she states, "Pashtun tribal culture considers face-to-face combat honorable."[87] Through 2012, nine hundred IEDs caused more than thirty-seven hundred Pakistani casualties.[88] Those were not honorable face-to-face attacks against an armed assailant; those were men, women, and children carrying about in their normal daily lives when a bomb takes their life or wounds them because of a tribal or ethnic dispute. Although, in this attack the insurgent would say there was no collateral damage, because,

[85] U.S. Air Force, Fact Sheets, accessed 1 March 2013.
[86] Joint IED Defeat Organization, "Cooperative engagement with Pakistan…."
[87] Benjamin, 203.
[88] Joint IED Defeat Organization, "Cooperative engagement with Pakistan…."

due to their ethnicity or tribe, they were all the intended targets. While this does not necessarily prove the necessity of using drones, it certainly debunks Benjamin's theory that the adversary is fighting honorably.

Statistics like these likely drive Pakistani President Zardari to make the seemingly repulsive comments he does about not caring about collateral damage. In a truly war-torn land, the struggling Pakistani government is willing to receive any help it can in combating the terrorists that are killing so many of its people. Absent a strong policy with Pakistan to play a larger role in combating terrorism, drones provide the only mechanism with tangible results, save for the use of ground forces to remove bin Laden. That thousands of civilians die each year at the hands of terrorists ushers in the cold reality that the government of Pakistan has to essentially accept a relatively small amount of potential collateral damage for the good of the many. Admittedly, that is a difficult argument to make. However, between 2006 and 2013 drones strikes have killed a recorded 2,498 al-Qaeda and Taliban fighters in Pakistan and 153 civilians.[89] By contrast, in 2011, terrorists or other extremist factors killed more than thirty-five hundred Pakistanis, and more than another thirty-six hundred were injured.[90] While the government of Pakistan's comments are not palatable for most democracies, the thirty accidental deaths from drone strikes in that same year is likely a lot smaller than if American combat ground forces were occupying Pakistan to engage the targets.

Knowing that the United States is not going to let insurgents seek refuge in weakened states, drones must be appreciated for what they provide, while culpability lies

[89] Long War Journal, http://www.longwarjournal.org/pakistan-strikes.php, updated 21 March 2013, accessed 22 March 2013.
[90] Center for Innovation Research Collaboration and Learning, "Pakistani Security Analysis Annual Report 2011," http://www.circle.org.pk/images/Pakistan%20Security%20Annual%20Report.pdf, access 19 March 2013.

in the hands of policy makers. Drones provide a natural progression of a technologically superior military, not a regression of strategy singularly focusing on one piece of technology.

Conclusion

While acknowledging the need for a revised drone policy, the successes of the drone strikes cannot be overlooked. They have saved an immeasurable number of lives, from preventing adversaries from attacking Coalition forces, to identifying roadside bombs, and targeting individuals in austere environments. Drones have changed the way in which the United States prosecutes its targets. With the approval of the host government, drones provide senior decision makers with options to target objectives, without committing overt acts of war like using combat ground forces. Drones provide tactical-level commanders alternatives to driving down IED laden roads with a capability of attacking an objective from the sky. Unmanned aerial vehicles provide a capability to get real-time footage and intelligence in environments that would be harmful to manned aircraft – in war or peace. Technological advancements have long secured the United States military as a global superpower. The advancement of drones is no different.

The catalyst of the accelerated nature of the drone program could be argued to be the transnational nature of our enemy. This reality means there needs to be a weapons system to keep pace with an elusive enemy, who seeks refuge outside a traditional battlefield. It also could be that risk is too high for pilots, and remotely piloted vehicles is the way to avoid risk. However, it is more likely that drones are a natural progression in a technologically driven society. As Dr. Brynjolfsson states, "Technology is transforming innovation at its core, allowing companies to test new ideas at speeds and

prices that were unimaginable even a decade ago."[91] While the drones used today are likely well ahead of the milestones set years ago, they have been in use for decades. Without a doubt, a causal factor in the rapid acceleration of drone technology is the real-world testing and application in the war zones provided, and to some degree the broad interpretation of the AUMF.

Unmanned aerial vehicles have certainly changed the way the United States prosecutes its targets. It has even changed the way our adversaries fight. Al-Qaeda and Taliban fighters in Afghanistan and Pakistan have routinely changed the way to pursue Coalition forces in the region to account for the overhead presence of drones. Our enemy no longer stands in formation with a uniform on and fights with conventional weapons, and it no longer stays in a confined area to engage in face-to-face combat. Instead, as a matter of survival, the tactics adopted by our enemy materialize in the form of IEDs, planted by the road or delivered in person, and insurgents flee to poverty-stricken areas with weak central governments in search of sanctuary, such as Yemen. To continue to fight against this threat, the United States adapted its own practices to increase its survival – state of the art unmanned aerial vehicles. The chasm between technologies only differs by the resources available to conduct the attacks – each is directed to exploit an enemies' weakness.

Technological advancements have long secured the position of the United States as a global superpower. McChrystal applied these technological advancements to reduce the capabilities of terrorist networks around the globe - sometimes with drones,

[91] Erik Brynjolfsson and Michael Schrage, "How Technology is Changing the Face of Innovation," *Wall Street Journal,* August 17, 2009. http://online.wsj.com/article/SB10001424052970204830304574130820184260340.html, accessed 20 March 2013.

sometimes without - but through advanced technology nonetheless. The goal of which is to reduce the number of American threats while reducing the number of American and civilian casualties. In lieu of deploying ground forces in large numbers around the globe to engage America's enemies, the United States can leverage technology to minimize the impacts – as well as reducing the stress on a sovereign nation by not occupying its country.

More research is needed to continue to explore the actual effects drones are having on an insurgency. Are they driving more towards the fight and is the use worth the risk? If the United States should not use drones, how should the United States pursue its enemies in countries like Yemen and Pakistan? Would occupation drive more indigenous people to an insurgency? These are some questions that, if answered, might contribute to the future of unmanned aerial vehicles and their role in the United States military.

What is clear is the use of drones should be coupled with a policy guiding its use. This way the misplaced angst can be directed more appropriately toward the ones culpable of their application. Developing a more transparent policy should enable the reputation of drones to remain consistent with its use. Unmanned aerial vehicles provide many benefits in all types of missions and should be regarded as a multi-mission technological advancement of a superior military power, not as an immoral nuisance committing civil rights violations around the globe. They provide real-time, or near real-time, situational awareness of dangerous environments be it a wildfire, damaged nuclear power plant, or enemy hideout while removing the risk to a pilot. In other words, these

are not the drones you are looking for – they are only the inanimate objects orchestrated by the motives of humans, to secure the safety of such.

Chapter Two

Droning in Africa

Introduction

In March 2012, al-Qaeda in the Islamic Maghreb (AQIM) overthrew government forces in northern Mali and gained control of a portion of the country.[92] While the government was reeling from a recent military coup d'état against its democratically elected government, an al-Qaeda affiliate terrorist organization took advantage of the chaos to secure control of northern Mali. Committed to pursuing al-Qaeda and its affiliates, the United States had to decide how to support African forces to combat al-Qaeda's aggressiveness while not fully committing ground forces from an already overtaxed military. Unmanned aerial vehicles provide this capability – to combat terrorist operatives while not committing large-scale ground forces. The caution here, however, as David Sanger and Conway Waddington assert, is not to overuse UAVs because of the tactical convenience.[93] As the United States continues to pursue al-Qaeda and its affiliates responsible for attacks on United States homeland, against its allies, and its interests abroad, North Africa will become increasingly more important for American national security, and will also test the strategic and tactical influence of unmanned aerial vehicles.

This chapter seeks to explore if drones can be used in places like North Africa in lieu of ground forces. Without an effective policy guiding their use, drones may provide

[92] Alexis Arieff and Kelly Johnson. "Crisis in Mali." Congressional Research Service, Library of Congress, 2013, 1.
[93] David Sanger. *Confront and Conceal: Obama's Secret Wars and Surprising Use of American Power*. Broadway, 2012, 244.

leaders with an option only because drones make pursuing terrorist operatives easy. As experiences have shown, there is a growing interest in the use of unmanned aerial vehicles in places like North Africa, but evidence has also shown that armed UAVs will not replace ground forces. The evidence suggests in most cases, ground forces will likely be better suited for strategic objectives, while drones will provide tactical advantages for the ground forces. In order to set the stage for this chapter, a brief outline in the interest in North Africa, as well as a brief explanation on AFRICOM's inception follows next.

Interest in North Africa

Less than one year removed from the military coup d'état that overthrew the Malian government in Bamako, coupled with the terrorist siege of the north, France began asserting its power and interest in the region. Realizing the "direct security threat," the French government deployed ground forces in early January 2013 to combat terrorist fighter groups in the north.[94] The interest of the United States came from a concern that al-Qaeda and its affiliates will "carry out training, expand recruitment, and advance transnational terrorist plots" in their new "safe haven" of northern Mali.[95] Wary of becoming a "co-belligerent," the United States offered to extend its assistance to the fight via intelligence collection, by way of unmanned aerial vehicles, as well as logistical support.[96] The use of drones provides the United States the opportunity to support a

[94] Arieff and Johnson, 9.
[95] Ibid., 10.
[96] "U.S. spy drones aiding Mali conflict," United Press International, March 4, 2013, http://www.upi.com/Top_News/World-News/2013/03/04/US-spy-drones-aiding-Mali-conflict/UPI-40421362411298/

ground war against al-Qaeda and its affiliates without risking the lives of its own troops on the ground – unless it is a high-value target.[97]

In discussing the proclivity of the United States' drone use in places like North Africa, two questions must be answered: under what authority does the United States engage terrorists in sovereign nations outside the traditional battlefield, and what are the American national security interests? The answer to the first question is often, and contentiously, tied to the AUMF. As noted in Chapter One, the AUMF controls and permits the United States to pursue and prosecute those responsible for the 9/11 attacks. Drones play a large role in the way in which the United States prosecutes terrorist operatives. To be sure, President Obama states, drones are "part and parcel of our overall authority when it comes to battling al-Qaeda."[98] The unmanned systems have indeed changed the way the United States prosecutes its targets.

For the second question, it has been argued by the *Washington Times*, and James Jay Carafano and Nile Gardiner, among others, that a collateral benefit to intervening in North Africa is to secure petroleum production.[99] This argument, however, is not likely to be the primary reason why the United States would become involved in Africa. According to the United States Energy Information Administration, more than sixty-five percent of the United States' oil imports come from five countries, none of which are in

[97] A high value target is defined by the United States Army's Field Manual 101-5-1 as, "A target whose loss to the enemy can be expected to contribute to substantial degradation of an important battlefield function."
[98] David E. Sanger. *Confront and Conceal: Obama's Secret Wars and Surprising Use of American Power*. Broadway, 2012, 252.
[99] "U.S. eyes West Africa's coastline, oil," The Washington Times, August 10, 2005, http://www.washingtontimes.com/news/2005/aug/10/20050810-094617-7461r/?page=all, and see James Jay Carafano and Nile Gardiner. "US Military Assistance for Africa: A Better Solution." Backgrounder 1697 (2003): 2.

Africa.[100] It is not that the United States does not care about petroleum production on the African continent. In fact, in 2005, the United States was projected to import twenty-five percent of its oil from Africa by 2015.[101] However, at the time of this writing, the United States seems to be more dependent on the Middle East, and more specifically the Organization of the Petroleum Exporting Countries (OPEC), for its petroleum products. Accordingly, the national security interest in North Africa appears more prominently to combat terrorist activity. Further, President Obama stated, "And we will use all elements of our national power to defeat al-Qaeda, and to defend America, our allies, and all who seek a better future."[102] This could easily be taken as a tribute to the large number of attacks conducted by unmanned aerial vehicles as an element of national power. On the other hand, with no ambiguity, President Obama declares the true reason for an involvement in Africa – to combat terrorist activity.

AFRICOM's Inception

Indicative of the importance Africa is to the United States, a separate combatant command was stood up to focus solely on strengthening the United States' relationship with African countries. Until 2007, the African continent was covered under the United States European Command (EUCOM). That meant EUCOM had to cover the entire

[100] The remaining thirty-five percent comes from seventy-five other countries. "Frequently Asked Questions," U.S. Energy Information Administration, accessed October 3, 2013, http://www.eia.gov/tools/faqs/faq.cfm?id=727&t=6.
[101] James Jay Carafano and Nile Gardiner, 2; and see Andrew Feickert. "US military operations in the global war on terrorism: Afghanistan, Africa, the Philippines, and Colombia." Congressional Research Service, Library of Congress, 2005, 12.
[102] Barack Obama. "Remarks by the President on a New Strategy for Afghanistan and Pakistan." speech, Washington, DC, March 27 (2009), http://www.whitehouse.gov/the-press-office/remarks-president-a-new-strategy-afghanistan-and-pakistan.

continent of Africa on top of 51 countries in Europe and part of Asia.[103] Given the gravity of the security dilemma in Africa, the United States created a separate Africa Command (AFRICOM) in 2008 to "build the defense capabilities" within Africa.[104] As identified by Andrew Feickert, Africa is important because of its role in the Global War on Terrorism (GWOT).[105] In fact, prior to standing up AFRICOM, the former Commanding General, James Jones, stated, "we don't pay enough attention to Africa, but I think we're going to have to in the 21st century."[106] Today is different. With a new combatant command stood up specifically to focus on Africa, numerous training exercises and initiatives are conducted with African countries with the support that best represents their specific needs.

At the time of this writing, there are fifteen named exercises, two operations, and eleven different programs AFRICOM is conducting with partner nations in Africa.[107] For example, Flintlock is a counterterrorism exercise that teaches small unit tactics in the Sahel and Maghreb area, while Africa Endeavor is an exercise focused on command and control for more senior-level military officials.[108] These are training initiatives focused on strengthening the core capabilities of militaries. While UAV training is a part of some training exercises, it is not the focus.[109] The focus is to train the partner nation in an

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[103] United States European Command, "Mission: The Region," accessed October 8, 2013, http://www.eucom.mil/mission/the-region
[104] United States Africa Command, "About the Command," accessed on October 1, 2013, http://www.africom.mil/about-the-command
[105] Feickert, 1.
[106] Ibid., 4.
[107] United States Africa Command, "What We Do," accessed on October 4, 2014, http://www.africom.mil/what-we-do
[108] United States Africa Command, "Flintlock," accessed on October 10, 2013, http://www.africom.mil/what-we-do/exercises/flintlock; and United States Africa Command, "Africa Endeavor," accessed on October 10, 2013 http://www.africom.mil/what-we-do/exercises/africa-endeavor.
[109] Sergeant Tatum Vayavananda, AFRICOM Newsroom, "U.S., Moroccan, German Service Members Conduct UAV Familiarization," May 6, 2013, http://www.africom.mil/Newsroom/Article/10773/us-moroccan-german-service-members-conduct-uav-familiarization

attempt to get to the root causes of the troubled continent, which can only be attained through forces on the ground.

This chapter is divided into four main sections. The first section presents an overall argument of the discourse surrounding the United States' role and the use of unmanned aerial vehicles in North Africa. The second section presents a case study examining the larger issues for using unmanned aerial vehicles as a way to achieve national policy objectives. This section concludes with empirical evidence supporting the use of unmanned aerial vehicles in lieu of ground forces for certain missions, but that they will not replace the use of humans. The third section is an analysis of the literature and empirical evidence of the likelihood and implications of using drones in North Africa. Finally, this chapter concludes with remarks on the analysis and evidence based on the literature and questions to guide further research.

Literature Review

While the decision to deploy UAVs to places like Africa may be more intuitive than thought provoking, the question gets more attention when trying to decide the specific use of drones in places like North Africa – armed weapon of war or strictly for ISR support. As a weapon of counterterrorism, drones provide undeniable advantages to defeat terrorist operatives – through lethal targeting as well as an ISR platform for ground forces. Yet as a tool to train indigenous forces in military tactics and decision-making, much like Flintlock and Africa Endeavor, there is no substitute for the human interaction of ground forces. As the United States continues to prosecute the war against al-Qaeda and its affiliates, drones provide the ability to support an aggressive counterterrorism

campaign from a distance. However, it is also the distance that precipitates convenience, or over-use, thereby inviting criticism of drone use because it is easy.

Interest in Africa

In order to examine the role and use of unmanned aerial vehicles in North Africa, it is important to understand why the United States has interests in what appear to be geographically desolate locations: because terrorist organizations are permitted to thrive in ungoverned and lawless regions of Africa, namely the Maghreb and Sahel regions, as well as the Horn of Africa.[110] Carafano and Gardiner posit a number of reasons why focus should be on Africa. They assert that if nothing else the "United States is facing increasing international pressure to play a more prominent role in the world's most troubled continent."[111] Feickert argues that the United States' concern about "the potential for Africa to become a breeding ground for terrorists" is cause for increased attention.[112] In fact, as the Pentagon plans for a long war on terror, officials in Central Command note that they do not want to lose sight of Africa as al-Qaeda and affiliates lose their safe havens in Afghanistan and seek refuge in places like Africa.[113] Indeed, Africa is a hotbed of terrorist activity and continuously struggling with civil strife.[114]

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[110] The Encyclopedia Britannica defines: the Sahel region as the East to West strip of land in North Africa where the northern deserts turn into the rainforests, http://www.britannica.com/EBchecked/topic/516438/Sahel; the Maghreb is the Northwest corner of Africa along the coast from Libya to Mauritania, http://www.britannica.com/EBchecked/topic/356614/Maghrib; and the Horn of Africa includes the countries of Ethiopia, Eritrea, Somalia, and Djibouti, http://www.britannica.com/EBchecked/topic/8135/Horn-of-Africa.

[111] Carafano and Gardiner, 1.

[112] Feickert, 12.

[113] Peter Spiegel. "Pentagon plans for 'long war' on terror," London Financial Times, August 25, 2005, http://www.ft.com/cms/s/0/e4df353a-1503-11da-9df1-00000e2511c8.html#axzz2hFkUFDLz.

[114] The definition of "civil Strife" is taken from Colin Kahl's, *States, Scarcity, and Civil Strife in the Developing World,* whereby it is a function of demographic and environmental stress caused by accelerated increase in population, a declining ability for the environment to sustain production, and a polarized

Carafano and Gardiner state the reasons for the attraction to Africa comes from "weak civil societies and poor law enforcement and judicial systems" which make it easier for nefarious groups to seek refuge.[115]

That Africa is home to terrorist training camps and where terrorist groups have more freedom of movement, is largely why North Africa has received the attention it has in the last few years. As United States and coalition forces destroy training camps in Afghanistan, Feickert indicates that al-Qaeda has increased its recruiting and training camps in the Horn of Africa, Nigeria, and Kenya, among others.[116] Africa is a large continent with much of it uninhabited and the parts that are populated are filled with pools of vulnerable people from which to recruit. Carafano and Gardiner state, "It is no coincidence that Osama bin Laden found safe haven in Sudan in the 1990s."[117] In the pursuit for those responsible for conducting attacks, and planning to conduct attacks, against the United States and its allies, the African continent remains a priority for the United States military.

With most agreeing on the need to become more engaged in Africa, it now becomes a question of how. Carafano and Gardiner argue for a focused presence in Africa by working more closely with the African countries to more aggressively mitigate the chances of having to respond to security issues with ground forces.[118] While "counterinsurgency and anti-terrorism campaigns" are necessary factors, and arguably the most important, in combating terrorists in Africa, these are only temporary solutions to

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allocation of resources. Kahl, Colin H. *States, scarcity, and civil strife in the developing world*. Princeton University Press, 2006.
[115] Carafano and Gardiner, 3.
[116] Feickert, 12.
[117] Carafano and Gardiner, 3.
[118] Ibid., 7.

the more systemic problems that plague the continent – weak, corrupt governments.[119] Indeed, the lawless nature of Africa is not restricted to terrorism, but other forms of illicit behavior as well. African states are also home to many forms of illegal activity, such as the illegal harvesting of ivory tusks.[120] Drones provide a tactical advantage as a weapon to wage war, but seem to fall short of affecting corrupt governments.

Support from a Distance

In the mid-twentieth century, the French had established "a variety of formal defence and military co-operation accords with the Francophone states in Africa."[121] The French wanted to protect its citizens living abroad as well as ensuring protection of the "strategic resources," described by Gregory as, "oil and uranium, and a ready market for French goods, French culture, and French ideas."[122] Protecting its French citizens and equities in Africa has brought French forces to the continent numerous times and in fact has led to military agreements with nearly two dozen countries as a step to "constitute a permanent intervention," as described by Robin Luckham.[123] For these reasons, the French will have to look beyond the tactical capabilities of the drones and focus their efforts on intervention through the use of ground forces in combat and training roles.

Drone technology is likely a step in the direction of supporting partner nations in combating terrorism while not committing ground forces. Some, such as Carafano and

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[119] Carafano and Gardiner, 4.
[120] Jeffrey Gettleman. "*To Save Wildlife, and Tourism, Kenyans Take Up Arms,*" The New York Times, December 29, 2012, http://www.nytimes.com/2012/12/30/world/africa/to-save-wildlife-and-tourism-kenyans-take-up-arms.html?ref=ivory
[121] Shaun Gregory. "The French military in Africa: past and present." African Affairs 99, no. 396 (2000): 437.
[122] Gregory, 436; and "France to buy US-made Reaper drones for use in Mali: Report," Press TV, May 18, 2013, http://presstv.com/detail/2013/05/18/304143/france-to-buy-us-drones-for-use-in-mali/.
[123] Gregory, 438; and Robin Luckham. "French militarism in Africa." Review of African Political Economy 9, no. 24 (1982): 56.

Gardiner, claim there are several reasons that the United States should not commit ground forces in Africa. While there is a desire to pursue al-Qaeda and its affiliates at all costs, deploying ground forces for armed combat in North Africa could not only create more friction within the indigenous populations, it would likely be particularly unpopular with the American population given the long wars in Iraq and Afghanistan.[124] For these reasons, providing ISR and logistical support to African forces—as well as the French in Mali—via unmanned aerial systems is a way to combat terrorist groups without deploying large amounts of ground forces in the same manner as the wars in Iraq and Afghanistan.

On the other hand, as Sanger discusses, the potential implications for the "light footprint" - the reliance of drones to achieve strategic objectives - may come with heavier costs than if "a much more decisive force," (i.e., ground forces) were used in the first place.[125] In other words, ground forces may be able to achieve military goals in shorter time than through a series of drone strikes. Furthermore, the over reliance on the tactical functions of drones because they are easy to use, comes dangerously close to defining the strategy.[126] The important point being that drone use in Africa, at least at first glance, is an easier alternative to ground forces, but when the strategic objectives call for a different element of American national power, the United States must be ready to commit the necessary level of military support in the interest of long-term stability.

Training, however, will only go so far. As Stephen Metz claims when discussing the role of drones, "Solving root causes is certainly easier with insurgent leaders and

[124] Carafano and Gardiner, 8; and see Sanger, 243.
[125] Sanger, 244.
[126] Ibid.

cadre out of the way."[127] To achieve this, the United States has shown examples of leaning to drone strikes as well as trusting this responsibility with combat ground forces. To be sure, from 1992 to 2008, the United States engaged in more than thirty-two armed interventions in Africa.[128]

Golden Hammer

Western military training will only go so far, however, when it comes time to deal devastating setbacks to terrorist groups in the near-term. As terrorist operations are uncovered, it is in the interest of the United States and its allies to act swiftly to prevent an imminent attack. Since the, "large-scale use of U.S. combat forces in Africa is not desirable," and the environment is not conducive to large scale forces, yet it is prime for unmanned aerial vehicles, drones provide the option to pursue terrorists.[129]

This then begs a question of doing something because of an ability to do it as opposed to doing something that is necessary. Conway Waddington argues the implications of the tactical advantages presented by precision-guided missiles in that they make it easy to target individuals with minimal collateral damage.[130] Waddington seems to take the argument of drones one step further by placing blame on the continued use of armed drones on the accuracy of the weapon systems. The argument is essentially indicating that the "technological promises of drones and precision strike… encouraged the implementation of tactics."[131] This same reason, however, is what may continue to

[127] Peter Singer. "Wired for war: The robotics revolution and conflict in the 21st Century." (2011): 221.
[128] Gary K. Busch. "The Logistics Of The War In The Sahel." Stability: International Journal of Security and Development 2, no. 2 (2013): Art-22.
[129] Carafano and Gardiner, 8.
[130] Conway Waddington. "Precision-Strike Technology and Counter-Terrorism: Conflating Tactical Efficiency with Strategic Effectiveness?." HITTING THE TARGET?. 81.
[131] Waddington, 80.

drive the use of drones when pursuing al-Qaeda. As Waddington asserts, drone strikes provide "political-risk-mitigating properties," which is an illusion of the electorate being credited with an aggressive pursuit of terrorists while simultaneously avoiding a commitment of deploying ground forces.[132]

Waddington references Maslow's "Golden Hammer," meaning that if this is the only tool, then it is looked upon to solve all your needs.[133] This reference closely resembles Leon Panetta's assertion, among others, that drones seem to be the only effective weapon against terrorists seeking cover in geographically, or politically, unsuitable environments for ground forces. For these reasons, scholars and professionals alike, such as Micah Zenko and Waddington, argue for a more closely regulated use of drone strikes as an implement of war.[134] Just because a drone was used, however, does not mean that the target would not have been worthy of ground force usage. The environment, such as the vast and open deserts within the Sahel, along with zero collateral damage, may have been conducive to a drone strike. This method was able to achieve its goal while removing the risk to American forces on the ground by using an unmanned system from the sky.

Drones, enabled with precision missiles and state of the art surveillance equipment, present a reliable and proven method of engaging targets. The proliferation in their use throughout the world has shown that the desire is there to continue to use drones in multiple capacities. The use of unmanned aerial vehicles is not just for counterterrorism operations, but a natural progression of use in other parts of the world as

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[132] Waddington, 80.
[133] Ibid.
[134] Micah Zenko presents his argument for reforming drone strikes in his book, *Reforming U.S. Drone Strike Policies*. Micah Zenko. "Reforming U.S. Drone Strike Policies." (Council on Foreign Relations, 2013).

well. After all, drones carry state of the art surveillance equipment. The MQ-1B Predator, a fairly well known UAV of the United States Air Force, can detect the heat signature of a human from ten thousand feet.[135]

In a recent move to increase ISR functions on North Korea, as well as Chinese ships in East and South China Seas, Japan has agreed to host the United States Air Force's premier ISR UAV collection platform, the RQ-4 Global Hawk.[136] However, this may come with a price. While the added collection benefits will certainly provide decision makers with potentially more timely and accurate information, the move will almost certainly be a great nuisance for the Chinese.[137] However, Secretary Kerry stated of this partnership with Japan, "this bilateral alliance remains a vital element of our respective national security strategies."[138] Weighing the risks, provoking China is worth the unprecedented ISR coverage of North Korea for the United States and Chinese Seas for the Japanese, and seemingly worth strengthening the relationship with Japan. Strengthening the bond with an ally to preserve their national security is not new for the United States, and it comes with collateral benefits. In the case of Africa, teaming with French and African forces in a non-combat, support role prevents the United States from getting pulled into a ground war while ensuring the tactical advantages of drones is available to allied forces.

The argument of relying on drones to solve long-term strategic objectives is weak on examples, while their use as a tactical weapon is still relevant. As former Assistant

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[135] "FAA authorizes Predators to seek survivors," http://archive.is/20120629064215/http://www.af.mil/news/story.asp?storyID=123024467, accessed October 11, 2013.
[136] Craig Whitock and Anne Gearan. "Agreement will allow U.S. to fly long-range surveillance drones from base in Japan," *Washington Post*, October 3, 2013, http://articles.washingtonpost.com/2013-10-03/world/42632036_1_chinese-ships-drones-south-china-sea.
[137] Whitock and Gearan.
[138] Ibid.

Secretary of State Johnnie Carson, when discussing what the military plan should include, states, "ensuring that the proposed military action is adequately linked to a sufficiently detailed political strategy and end-state for military operations."[139] While the Assistant Secretary's comments are specific to Northern Mali, it supports choosing a tactic that supports the end-state as opposed to succumbing to Maslow's "Golden Hammer." What can be deduced from the current literature is while drones do have their place in providing the Unites States a technological advantage; they are no supplement to training the indigenous militaries of Africa in solving the root causes of why terrorists are seeking safe havens in the Maghreb, Sahel and Horn of Africa. Rather the United States should employ all its elements of national power as appropriate, to include ground forces and unmanned aerial vehicles.

To get to the root of the problem, the United States and its allies need to ensure they are not only focused on existing terrorists, but also the reasons for the terrorist rich environment; thus the reason not to rely on drones alone to achieve stability in Africa. Focusing on the military services, law enforcement and judicial systems, and ensuring political systems are democratic are paramount in addressing the security concerns within Africa.[140] An aggressive counterinsurgency campaign in Africa could precipitate reduced criminal activity overall given the proclivity of terrorists to engage in all kinds of illegal and nefarious activity. But to ensure the environment is stable enough to thwart emerging threats, a more hands-on approach is required. To achieve these desired effects requires a more focused approach by the United States.

[139] Arieff and Johnson, 13.
[140] Carafano and Gardiner, 4.

Case Study

Many examples exist of using drones to target insurgents in North Africa. This underscores the importance of balancing a potential reliance on unmanned aerial vehicles, the use of combat ground forces, and training partner African nations in counterterrorism tactics. The reason for choosing the following examples is to examine the larger picture, which is the increased use of unmanned aerial vehicles and to consider whether they are better than ground forces in places like North Africa. To do this, the case study contrasts combat military actions in Somalia and Libya, as well as United States support to Mali, with the arguments presented in the current literature.

United States support to French and Malian forces--largely consisting of un-armed UAV ISR coverage--highlights the desire to combat al-Qaeda, as well as reducing the risk to American ground forces. In contrast, the October 2013 missions in Libya and Somalia indicate the United States is fully committed to using combat ground forces when either the conditions are not suitable for a drone strike or the target value is high enough to warrant the risk to ground forces.

UAVs, Not Ground Forces

In March 2012, shortly after the military coup d'état, AQIM took control of the Northern portion of the country of Mali.[141] France deployed forces to assist the Malian government to combat AQIM and to regain control of the Northern part of the country. While the European Union and Japan, among others, pledged to provide foreign aid in the sum of hundreds of millions of dollars, the United States was preparing to offer monetary

[141] Alexis Arieff and Kelly Johnson. "Crisis in Mali." Congressional Research Service, Library of Congress, 2013, 1.

and military assistance.[142] The fact that the United States did not send in troops compliments Carafano's and Gardiner's counsel that the United States defer to what other countries will do to support before determining its own level and method of support. This is important because losing technology, albeit expensive, is seemingly far more acceptable to the American public than committing ground forces on another continent to engage in war.

As French forces partnered with Malian forces to take back seized portions of Northern Mali from AQIM, Jeff Gilmour argues, "the crucial issue is likely to be ensuring that the African forces which take over from departing French troops are properly trained."[143] In other words, once the French push AQIM back and French troops return home, it will be important for the remaining African forces to keep AQIM out of Mali. The point of Gilmour's comment underscores the importance of training Malian forces while simultaneously leading the charge against terrorist fighters. The French are able to combat AQIM with far greater efficiency, but in order for Mali to remain in Malian control, it is important for the Malian government to take the lead as French forces depart. In other words, as Carafano and Gardiner assert, the United States will benefit more by training the militaries of African countries.[144] This exchange is only possible when there are allied forces on the ground to conduct the training in person – not through any technological advancement, such as unmanned aerial vehicles. Perhaps, it can be left to the partner nations to conduct these training missions, while the United

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[142] Jeff Gilmour. "The key priority for Mali is ensuring that African forces are ready to take over…."; and "U.S. spy drones aiding Mali conflict," United Press International, March 4, 2013, http://www.upi.com/Top_News/World-News/2013/03/04/US-spy-drones-aiding-Mali-conflict/UPI-40421362411298/

[143] Jeff Gilmour. "The key priority for Mali is ensuring that African forces are ready to take over when French troops leave the country." European Politics and Policy at LSE (2013).

[144] Carafano and Gardiner, 8.

States supports through UAVs. However, drones do have their place, and it is an important one too.

The conflict in Mali, where American combat ground forces were not deployed, was being supported by the United States through the use of unmanned aerial vehicles serving ISR functions.[145] Real-time video and data were sent to the French enabling their ground forces to find and engage enemy fighters directly.[146] The ISR capabilities of drones enabled more than sixty attacks against enemy forces within the first few months of serving in this support role.[147] The extension of UAV support to the French falls in line with President Obama's "new model for counterterrorism," in that support is provided via drones "so American troops do not have to" fight the ground war – unless, as seen in Libya and Somalia, the conditions of engaging the target are not conducive to a drone strike.[148]

Cautious in becoming a "co-belligerent" in the Malian conflict, the military assistance provided by the United States largely came in the form of logistical and ISR activities.[149] Indeed ISR support to the French and African troops came from unmanned aerial vehicles, but not from armed drones, and these ISR collection platforms were used to provide "raw data" to French and African troops for their own consumption and determination on how to use the information.[150] Unmanned aerial vehicles provide a degree of separation between being actively engaged in a combat role, where the loss of

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[145] "U.S. spy drones aiding Mali conflict."
[146] Eric Schmitt. "Drones in Niger Reflect New U.S. Tack on Terrorism," The New York Times, July 10, 2013, http://www.nytimes.com/2013/07/11/world/africa/drones-in-niger-reflect-new-us-approach-in-terror-fight.html?_r=0.
[147] "U.S. spy drones aiding Mali conflict."
[148] Schmitt.
[149] "U.S. spy drones aiding Mali conflict."
[150] Ibid.

human life is an expected outcome, and supporting combat operations without risking a human life.

There are many advantages to using UAVs, especially in places like the Sahel where the environment is not conducive to ground forces, yet it is prime terrain for "sky-borne observational devices."[151] Since drones do not require ground forces, the United States does not have to contend with the logistical difficulties that accompany combat ground forces for extended periods of time.[152] Some drone bases are relatively small, such as the one in Niger with approximately one hundred people supporting operations in Mali.[153]

As a prime example of the United States relying on unmanned aerial vehicles, the United States is providing more support to the French via drones than with manned aircraft. In contrast to the more than seventy manned aircraft from nearly a dozen countries dedicated to support Malian forces, the United States is relying more upon its unmanned systems.[154] This could also support Carafano's and Gardiner's proposition that the United States should look to support the conflicts in Africa after assessing what is missing from the support of other partner nations.[155] In either case, the evidence supports that the United States views its subject matter expertise on unmanned systems as the best way to support a conflict, and further, that armed conflicts today should not be waged without these technological advantages.

[151] Busch.
[152] Ibid.
[153] Ibid.
[154] Busch.
[155] Carafano and Gardiner, 8.

Ground Forces, Not Armed Drones

In early October 2013, with drone coverage already on the continent, the United States conducted two different operations simultaneously using combat ground forces.[156] On the coast of Somalia, United States Navy SEALs pursued a senior al Shabaab leader and engaged in a fire fight with militants, but subsequently had to retreat due to the potential for civilian casualties.[157] The use of ground forces, and the subsequent withdrawal due to civilian casualties, indicates that while drones provide invaluable ISR capabilities, they are no substitute to ground forces. This is important to highlight because the use of force was not elevated to overcome adversaries in the area, but rather the operation was aborted because the collateral damage would have been too high.

Much like the risk President Obama took when he chose to send ground combat forces after Osama bin Laden, he took a risk allowing ground forces to enter Libya. Leading up to the decision to intervene in Libya, President Obama proclaimed, there will be "no boots on the ground."[158] Despite those words, and the plethora of drone activity in North Africa, targeting the Libyan militant indicted for bombing United States Embassies in Africa was important enough to warrant the use of combat ground forces.[159]

What is significant about these two operations is that they emphasize the fact that drones are not the "only game in town" when it comes to places like North Africa. For whatever the reason, the military decided not to rely on drone strikes. It does not mean

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[156] David Kirkpatrick, Nicholas Kulish, and Eric Schmitt, The New York Times. "U.S. Raids in Libya and Somalia Strike Terror Targets," accessed October 7, 2013, http://www.nytimes.com/2013/10/06/world/africa/Al-Qaeda-Suspect-Wanted-in-US-Said-to-Be-Taken-in-Libya.html

[157] Ian Johnston and Adam Withnall, The Independent. "US Navy Seal team fails in attempt to kill al-Shabaab leader in Somalia raid following Nairobi mall attack," accessed October 7, 2013, http://www.independent.co.uk/news/world/africa/us-navy-seal-team-fails-in-attempt-to-kill-alshabaab-leader-in-somalia-raid-following-nairobi-mall-attack-8860808.html

[158] Kirkpatrick, Kulish, and Schmitt.

[159] Ibid.

drones were not used as a surveillance and intelligence collection platform, but it does show that the United States is committed to using ground forces in lieu of drone strikes, and not just using its "Golden Hammer" because it would have been easier.

In North Africa, and specifically in Mali, targeting terrorist operatives is best left to unmanned aerial vehicles when the terrain supports this tactic, while African forces conduct security missions in the populated cities.[160] The success of the unmanned systems in the Malian conflict has made such an impression that the French are pursuing the acquisition of unarmed MQ-4 Reaper systems from the United States.[161] While Mali provides a clear depiction of the "new model for counterterrorism," reducing the risk to ground forces by way of unmanned aerial vehicles, the operations in Libya and Somalia support the commitment of the United States to pursue terrorists with ground forces as well. In either case, coupled with the efforts of AFRICOM to train the militaries of partner nations, the United States seems to be leveraging the technological capabilities of drones to support ground forces, but is still committed to the region enough to send ground forces – both to train and for combat purposes – based on specific mission requirements. In other words, drones are not relied upon for operations that are best suited for troops on the ground, but they are looked upon as a way of reducing the risks to ground forces.

Proliferation of Drone Technology

The development of unmanned systems has grown leaps and bounds in the last dozen years or so – most, but not all, of the development and penchant for drone use

[160] Busch.
[161] "France to buy US-made Reaper drones for use in Mali: Report."

comes from the United States.[162] Since before the Second World War, the United States has used unmanned aerial vehicles, also referred to as remotely piloted vehicles.[163] While the wars in Iraq and Afghanistan did not create a demand for drone use, it unarguably accelerated its use and application. There are more than "4,000 different unmanned aircraft platforms" throughout the world, of which the United States is projected to account for roughly forty-five percent of that global market.[164] To be sure, the United States Department of Defense spends nearly half of the world's budget on unmanned robotics systems, of which ninety-percent is on aerial platforms.[165] In other words, almost half of all the money spent on robotics around the world is spent on UAVs by the United States. As with the use of American drones in Africa, most of the drones in circulation are used as ISR collection platforms.[166]

The United States is not the only country heavily investing in drones; China is pushing to surpass the United States in terms of the number of aircraft, and the UAV industry in the Middle East is expected to hit the $1 billion mark by 2021, while North Korea inquires about armed and unarmed drones as well.[167] Around the world, there are varying degrees of manufacturing ability; yet, most countries seem to be showing interest in their use. South Africa is currently the only country on the African continent that is manufacturing UAVs, although given the surveillance capabilities of drones the entire

[162] Dan Parsons. "Worldwide, Drones Are in High Demand," National Defense, May 2013, http://www.nationaldefensemagazine.org/archive/2013/May/Pages/Worldwide,DronesAreinHighDemand.aspx, 30.
[163] Directory of U.S. Military Rockets and Missiles, updated May 26, 2003, http://www.designation-systems.net/dusrm/m-34.html.
[164] Parsons, 30.
[165] Ibid.
[166] "U.S. spy drones aiding Mali conflict;" and see Parsons, 30.
[167] Parsons, 32.

continent provides ample opportunities for their use in all capacities.[168] A plausible explanation for the spike in interest for UAVs likely comes from much of the success coalition forces have had in Afghanistan, but perhaps also driven out of necessity, as well as the interest to reduce the risk to their own troops.[169] The evidence suggests continued use is inevitable.

The fact that so many countries are pursuing unmanned technology is not the surprise. As FitzSimonds claims, "nations have always pursued innovation to increase military effectiveness relative to potential adversaries."[170] The innovation behind American drones has enabled its forces to engage enemy targets from great distances. That other countries, in the words of Busch, "have not shown neither the will, the cash or the wit to produce their own," is likely the most surprising statistic. On the other hand, as Parsons' research has concluded many other countries are now in the hunt for UAV technology – a telling sign of other nations potentially looking for drones to conduct military operations in lieu of their ground forces.

The dominance of this industry by the United States has made the drone such a formidable, seemingly unchallenged, weapon of war. So much so that President Obama has essentially defended the drone program as a use of "preemptive strikes against terrorists" via drones, ostensibly to limit the number ground forces outside the traditional battlefields.[171] While drone technology provides a tactical advantage, which at times emboldens strategic operations, it will not take the place of ground forces working to

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[168] Parsons, 33.
[169] In the 370 recorded drone strikes in Pakistan by The Long War Journal, 2,682 enemy fighters have been killed. The Long War Journal. Updated October 2014, http://www.longwarjournal.org/pakistan-strikes.php
[170] James R. FitzSimonds and Jan M. Van Tol. "Revolutions in military affairs." (1994), 1.
[171] Sanger, 252.

solve the crux of the issue. Or in the words of Macky Sall, "we need training, we need material, we need intelligence," when speaking about the security of Africa as a whole.

Analysis

The evidence suggests that drones are the ideal weapon of choice in places like Africa given their endurance and precision-strike capabilities. The long mission time of drones makes them an ideal candidate to provide ISR support to ground forces in training or combat missions, or to engage an enemy fighter when the environment is right. When pursuing an enemy that "is not guided by territorial jurisdiction," unmanned aerial vehicles provide the ability to reach enemy fighters without committing ground forces.[172] In other words, since the enemy is not located in one place, the United States will have to widen its aperture extending outside traditional battlefields, such as North Africa, to pursue the dictum of both Presidential administrations since September 2001.

Deploying ground forces around the globe to chase al-Qaeda operatives will not likely be a popular decision with the American public – nor is it likely a sustainable course of action for the military. Drones on the other hand provide the opportunity to engage a target without having combat ground forces. This gives policy makers the chance to target terrorist operatives outside the traditional battlefields without further straining a military that has fought two wars in a nine-year period, and enters its fourteenth year in Afghanistan. However, it is incumbent on the United States to ensure drones are not used just because they can be; meaning that drones do not shape United States strategy to Africa. As Gouré discusses the impact of new technology, they "give

[172] Rohan Gunaratna. Inside Al-Qaeda: global network of terror. Columbia University Press, 2002, 11.

decisive if not necessarily strategic advantage to the party employing them."[173] Given the creation of AFRICOM and the focus on training African partner nations, as well as recent combat action in Libya and Somalia by ground forces, it appears that drones are not shaping United States strategic objectives in Africa, at this time.

However, Presidential administrations since 2001 have had the same message: we will defeat terrorists. While in early 2002, the message was focused on retribution for September 11th, years later the theme is the same from President Obama when talking about terrorists, and specifically al-Qaeda. President Obama declared, "we will defeat you," and in October 2013, Secretary Kerry proclaimed terrorists, "can run but they can't hide."[174] The messages are clear and unambiguous enough to realize that as long as al-Qaeda is considered a threat, the United States will be in pursuit the world over. While the use of drones has aroused considerable debate on the legality and effectiveness as a tool of counterinsurgency, they have been effective in killing more than three thousand enemy fighters in Pakistan and Yemen alone.[175] To be clear though, drone strikes, outside Afghanistan, take place in Pakistan, Yemen, and Somalia, according to open source watch groups.[176] Regardless of the measure to counter an insurgency, Metz claims, "It still requires putting some people in the dirt."[177] But an important point is that drones are not just killing machines. In North Africa the only United States drone strikes appear to be focused on Somalia, while support over the rest of the continent, Mali in particular, comes in the form of ISR collection. Given the requirement to pursue al-

[173] Dan Gouré. "Is There a Military-Technical Revolution in America's Future?." The Washington Quarterly 16, no. 4 (1993): 175.
[174] Barack Obama; and see Johnston and Withnall.
[175] The Long War Journal has recorded 474 drone strikes between Yemen and Pakistan. Chapter Three will delve deeper into the role of drones in counterinsurgency and counterterrorism operations.
[176] The Long War Journal and New America Foundation are tracking drone strikes in these countries, while The Bureau of Investigative Journalism seems to focus on Somalia as well.
[177] Singer, 221.

Qaeda at all lengths, drones provide invaluable ISR and combat functions that remove the risk to ground forces in combat, as well as the footprint required to sustain combat forces.

On the other hand, given the technological capabilities, and lethal precision, what if the recent mission on the coast of Somalia, where the United States sustained zero casualties, resulted in Navy SEALs getting wounded? Would questions arise on why the unmanned systems were not used in a lethal strike? Without knowing the specifics of the mission it remains unclear if drones were performing ISR functions, but what is known is that they were not used in a lethal capacity. What is telling about this mission, where drone strikes have occurred, is that the technological advantage of drones does not appear to be driving all strategic objectives in Africa. Furthermore, it is indicative that the United States does not always rely on drones in lieu of ground forces.

Numerous examples of drone strikes in Pakistan, Yemen, and to a lesser extent, Somalia, as well as the rapid proliferation of UAV technology, are indicators that armed UAVs are the weapons of choice in targeting terrorist operatives. However, as evidenced in the cases of sending ground forces, not armed UAVs, in Somalia and Libya suggest that the United States is not always looking for drones to target terrorist operatives. Accordingly, this suggests that the United States is not looking to drones as a replacement for ground forces, but rather a tactical weapon system ensuring the success of ground forces.

In a perfect world, the answer to combat terrorism or to thwart an insurgency would rest squarely on the indigenous population's military or law enforcement and would take place without any collateral damage. This however, is simply not how it works. In places like North Africa, and for that matter most of Africa, it is the very lack

of ability to prevent terrorism from growing that demands the attention of the United States. To prevent terrorist groups from conducting attacks on American interests in Africa and planning and training to conduct attacks in the United States, a combination of drones, combat ground forces, as well as ground forces training partner nations are used to undermine the efforts of terrorist organizations and it appears to be these factors that are shaping the strategic objectives in North Africa.

Conclusion

After more than a dozen years of fighting the Taliban and al-Qaeda, among others, in Afghanistan, coupled with nine years of simultaneous fighting in Iraq, the United States military and its civilian leaders have reason to look for technological innovations that reduce the human footprint as well as the risk to its service members. However, deciding whether or not to use unmanned aerial vehicles in places like North Africa comes with a few caveats.

Drones may be easy to use in certain circumstances, but they should not drive strategic decisions. For example, if the goal is to ensure African military forces are better trained and equipped to combat terrorists, drones will not achieve that goal. Troops on the ground would be better suited to train and equip African partner nations. Furthermore, evidence has shown that combat ground forces are still used to capture or kill high value targets. As a tactical support tool, drones can provide invaluable battlefield intelligence on enemy forces, and in some cases engage them with precision-guided missiles.

In the interest of reducing the risk to military service members, drones provide that degree of separation by removing the pilot from the aircraft. Coupled with the reduced footprint on the ground, this makes drones an even more attractive instrument of war for policy makers aggressively pursuing al-Qaeda under the auspices of the GWOT. On the other hand, the cautionary advice of negative effects of the light footprint strategy carries some careful considerations. If the United States relies too heavily on drones to serve as the primary tool in targeting enemy forces without complimentary ground forces training African nations on reducing civil strife, thereby reducing the vulnerability of the indigenous population to an insurgency, then the United States accepts the risk of endlessly pursuing targets in North Africa.

The questions to guide future research from this study entail better understanding of the long-term effects of supporting a war via drones. If drones provide for a reduced footprint, does that impact the ability of the United States armed forces to work effectively on the ground with partner nations? Will an over-reliance on drones label the United States as an absentee partner, not fully committed to missions that may cause casualties among its service members? Will that risk aversion affect the quality and readiness of the United States military?

Only time will tell if this assessment is right. It is likely safe to assume that the United States, among many other countries, will continue to rely heavily on drones to provide key ISR support to ground forces, and to a lesser extent to serve as an attack force, for the foreseeable future in places like North Africa. However, whether or not they will be better than ground forces for American national security purposes may not be

answered for a long time. In any case, the tactical advantages of drones are many, but when the mission calls for personal interaction, nothing can replace ground forces.

Chapter Three

May the Force Be Applied Appropriately

Introduction

Unmanned aerial vehicles have made a significant contribution toward protecting ground forces and prosecuting the enemies of the United States through their ISR and strike capabilities. But are they being used effectively and efficiently to meet the strategic goals of the United States? To that end, a clear goal is needed to ensure the use of force via drones is consistent with the strategic goals of the United States. As President Obama adopts a "COIN strategy only in the service of a counterterrorism goal," he attempts to conflate two disparate terms.[178] In other words, because COIN and CT are not synonymous, limiting the use of force to COIN may leave out the necessary components of CT required to accomplish United States strategy. This hybrid approach does not fully leverage the necessary components of either CT or COIN, and in fact may be counterproductive and weaken the effects of both.[179] Consequently, drones risk being criticized for their application in one type of mission, while they were being used to support another type.

This is relevant because since its inception, "air power" has become a principal component of the United States' strategy in wartime, and drones are no exception.[180] How will an increase in drone usage affect the United States' ability to counter an insurgency and fight terrorism? Furthermore, are drones better suited for COIN or CT

[178] Michael J. Boyle. "Do counterterrorism and counterinsurgency go together?." International affairs 86, no. 2 (2010): 334.
[179] Boyle, 336.
[180] Michael Horowitz and Dan Reiter. "When does aerial bombing work? Quantitative empirical tests, 1917-1999." Journal of Conflict Resolution 45, no. 2 (2001): 147.

operations? This chapter seeks to explore if drones, when used properly, are an ideal weapon of war. Further, if the theory is true, the expectation is that drones can support both CT and COIN missions. However, the type of mission will need to be clearly identified in order to ensure the proper use of force is applied from drones.

Throughout the wars in Afghanistan and Iraq, politicians and military leaders alike have seemingly used counterterrorism and counterinsurgency interchangeably, as if these terms are synonymous. Michael Boyle describes how these terms can be confused when he states, "terrorist threats are now regularly described as insurgencies and vice versa."[181] Using these terms interchangeably, though they mean different things, causes confusion and risks misplacing culpability when things go wrong. According to the Department of Defense (DoD), counterinsurgency is defined as, "Comprehensive civilian and military efforts designed to simultaneously defeat and contain insurgency and address its root causes."[182] This definition further requires an understanding of "insurgency." David Kilcullen defines an insurgency as "a popular movement that seeks to change the status quo through violence and subversion."[183] Fundamental in the process of defeating or containing the popular movement is the importance placed on supporting the relevant central government and population.

By contrast, counterterrorism efforts work to target a terrorist group or individual with little to no regard for additional factors. This is important because these efforts may not place any importance on supporting the central government. DoD defines

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[181] Boyle, 335.
[182] Joint Staff. "Joint Publication 1-02." Department of Defense Dictionary of Military and Associated Terms 12 (2014), 58.
[183] David Kilcullen. "Countering global insurgency." *The Journal of Strategic Studies* 28, no. 4 (2005): 604; and Insurgency is defined by the Department of Defense as "The organized use of subversion and violence to seize, nullify, or challenge political control of a region. Insurgency can also refer to the group itself;" Joint Staff. "Joint Publication 3-26." Counterterrorism, November 13, 2009, GL-7.

counterterrorism as, "Actions taken directly against terrorist networks and indirectly to influence and render global and regional environments inhospitable to terrorist networks."[184] In this definition "terrorist" requires a further explanation. David Kilcullen defines terrorism as, "politically motivated violence against non-combatants with the intention to coerce through fear."[185] As counterinsurgency targets root causes, counterterrorism targets the individual actors. Drones can provide support in either case – exploiting a network through kinetic strike or intelligence collection. However, their use needs to support the specific strategy being undertaken: counterterrorism or counterinsurgency.

The purpose of this chapter is to present an argument for when drones can properly support both COIN and CT operations. As discussed in previous chapters, drones provide invaluable ISR support enabling ground forces, in either capacity, to achieve their mission, but do not completely replace ground forces. In order for drones to be more effective in their use, the type of mission they are supporting should be more clearly defined to guide their use. This is important to understand because the way in which an enemy is described can affect the way the United States will pursue its enemies through the instruments of national power.[186]

This chapter is divided into four sections. First, the literature review examines the differences in counterterrorist and counterinsurgency principles and explains how drones can support either one. Second, a case study contrasts drone applications in Pakistan with

[184] Joint Staff, "Joint Publication 1-02," 59.
[185] Kilcullen, "Countering Global Insurgency," 597; and, The DoD defines Terrorism as, " The unlawful use of violence or threat of violence, often motivated by religious, political, or other ideological beliefs, to instill fear and coerce governments or societies in pursuit of goals that are usually political," Joint Staff, "Joint Publication 1-02," 255.
[186] The DoD defines instruments of national power as, "All of the means available to the government in its pursuit of national objectives. They are expressed as diplomatic, economic, informational and military;" Joint Staff, "Joint Publication 1-02," 127.

Yemen and Afghanistan, to support counterinsurgency and counterterrorism. Third, the analysis section provides a thorough review of the critical comments and reflects on the use of force from unmanned vehicles. Lastly the conclusion section summarizes the points made within this chapter and raises questions to guide further research. Additionally, statistics in this study on civilian casualties and the number of strikes were taken from The Long War Journal.[187]

Literature Review

Much of the debate in learning how to combat forces in Afghanistan and Iraq comes from conflating counterterrorism with counterinsurgency. Although this may seem like semantics to some, the reason it is important to keep these terms separate is because these words will drive how an enemy is prosecuted by the United States. In turn, how the enemy is prosecuted is where drones become involved. Leading counterinsurgency experts, such as David Kilcullen, argue that the war in Afghanistan, and more broadly against "global jihad," should be prosecuted with counterinsurgency techniques and therefore have become critical of drone use.[188] Others in the field, such as Michael Boyle, challenge that claim and state al-Qaeda is not a global insurgency, but rather a "resilient and highly lethal terrorist organization… that has not articulated a vision of political life."[189] Drones play an important part of this argument as it pertains to

[187] There are other sources, such as New America Foundation and The Bureau of Investigative Journalism, which provide different statistics. However, for the most part the statistics were fairly close to each other. The reason for choosing The Long War Journal is because the data was in a presentable fashion to analyze and make evidenced-based judgments.
[188] Global jihad is described as an insurgency that "seeks to transform the entire Islamic world and remake its relationship with the rest of the globe," Kilcullen, David J. "Countering global insurgency." *The Journal of Strategic Studies* 28, no. 4 (2005): 604.
[189] Boyle, 338.

the type of mission the drone is being tasked to complete – supporting counterterrorism or counterinsurgency operations.

Although there appears to be some general agreement on being able to identify a *classic* insurgency (such as the National Liberation Front in Vietnam), classifying the key antagonists in the *War on Terror* (such as al-Qaeda) seems to lack similar clarity. Categorizing al-Qaeda as a terrorist organization intuitively implies a counterterrorist approach, yet there is a body of scholarly and professional work, from Kilcullen for example, indicating a counterinsurgency strategy is more appropriate.[190] To be sure, the Army and Marine Corps Counterinsurgency Field Manual expanded their definition in that, "today's operational environment also includes a new kind of insurgency, one which seeks to impose revolutionary change worldwide."[191] This expanded definition supports Kilcullen's description of a more global insurgency as a threat not contained within a single state. Kilcullen takes this globalization one step further and posits another adaptation of insurgency, a "resistance insurgency."[192] A resistance insurgency is interested more in causing mass chaos and undermining the role of the government than it is in gaining political control.

In regard to Afghanistan, Boyle makes the distinction that combating the Taliban is a function of counterinsurgency, while targeting al-Qaeda is a function of counterterrorism. Because they are vastly different terms with different sets of parameters to achieve the goal, using these two terms interchangeably could work at "cross-purposes" if commingled.[193] Boyle states, "A CT mission would focus

[190] Kilcullen, "Countering Global Insurgency," 597.
[191] Boyle, 335.
[192] David Kilcullen. "Counter-insurgency redux." *Survival* 48, no. 4 (2006): 115.
[193] Boyle, 336.

exclusively on Al-Qaeda while offering little or no support to the Karzai government; a COIN mission envisages a comprehensive commitment to defeating the Taleban and rebuilding the Afghan state while destroying Al-Qaeda operatives there."[194] In other words, deciding between COIN and CT is the difference in level of support to the host government and the use of force.

On the other hand, Kilcullen makes the argument that because insurgents use terrorism as a persuasive tactic, does not imply they are terrorists requiring a counterterrorist approach to combat their methods. Kilcullen advocates for counterinsurgency methods on a global scale. Briefly describing the basic principles of CT and COIN will provide insight to using drones to exploit an enemy's weakness and strengthen the ability of the United States to conduct these operations.

The Basic Principles of Counterinsurgency

Counterinsurgent theorists and experts generally believe that fundamental to the practice of COIN is pacification, "winning hearts and minds," and the denial of an insurgents' safe haven, among other considerations to an insurgent force.[195] The steps taken in a successful COIN strategy place as much, if not more, emphasis on the local population than on the insurgent. However, each step taken is calculated to strengthen the central government and weaken the insurgency. Kalev Sepp acknowledges that in studying successful and unsuccessful counterinsurgent warfare, an "outline," or "best practices" can be revealed, but it is far from a prescriptive pronouncement of a way to

[194] Boyle, 335.
[195] Kilcullen, "Countering Global Insurgency," 606; and Kalev I. Sepp. *Best practices in counterinsurgency*. NAVAL POSTGRADUATE SCHOOL MONTEREY CA DEPT OF NATIONAL SECURITY AFFAIRS, 2005, 10.

defeat all insurgencies.[196] Sepp posits the focus must be on "the country's people and their belief in and support of their government."[197] As a result, the foremost objective of the host government must be on "winning [the people's] hearts and minds."[198] To be sure, government abuse of human rights is not only seen in counterinsurgency failures, but also as the trigger of an insurgency.[199] Therefore, a basic premise of counterinsurgency, in order to placate the insurgency, is to achieve some level of negotiation between the insurgency and government.[200] On the other hand, in a resistance insurgency, because there is no desire to govern, negotiations may be based more on ideologies than politics. A resistance insurgency, described by Kilcullen, places more emphasis to "discredit" and "undermine" the existing government without a comprehensive plan to govern.[201] This type of insurgency generally lacks a "unified front" and simply seeks to destroy the existing government and "expel foreigners."[202]

The Basic Principles of Counterterrorism

By contrast, counterterrorist methods do not directly place an emphasis on the host nation's ability to govern or win over their own population, nor are there hearts and minds to focus on placating. The DoD's Joint Publication 3-26 states the military strategic objectives in counterterrorism are to deny resources, enable partners to counter- and prevent terrorism in their own country, defeat terrorists, and establish conditions to

[196] Sepp, 8.
[197] Sepp, 9.
[198] Ibid.
[199] Ibid.
[200] Kilcullen, "Countering Global Insurgency," 606.
[201] Kilcullen. "Counter-insurgency redux," 115.
[202] Ibid., 116.

counter ideological support.[203] The priority of these efforts are "actions taken directly against terrorist networks" themselves.[204] Or as Boyle states of counterterrorism, methods are "offensive measures undertaken to stop an adversary from employing terrorism;" the focus of which being the one employing terrorism.[205] These measures include, "to capture or kill senior leadership and senior operatives, eliminate safe havens, destroy training camps and resources, capture or kill cell members (foot soldiers), and disrupt recruiting and indoctrination efforts."[206] These are actions taken against an adversary either through the use of training and equipping the host nation or conducted unilaterally, with the preference on the former.

Conflating CT and COIN

There are similarities in the two, such as they are both part of *Irregular Warfare*, but the fundamental difference appears to be in how force is applied.[207] Force applied in support of counterinsurgency appears to be more calculated and deliberate, as well as more judiciously applied, while weighing second and third order effects; whereas in counterterrorism, force is applied to eliminate a target without prejudice and may happen quickly. When used together the effects of one can negate the other. Boyle raises four primary concerns. First, "popular backlash" occurs because CT can be seen as a violent use of force, and the violence in COIN should be more "choreographed" so as not to invade too much of the private population's security. Second, "counter mobilization"

[203] Joint Staff. "Joint Publication 3-26," vii.
[204] Joint Staff, "Joint Publication 1-02," 59.
[205] Boyle, 342.
[206] Joint Staff. "Joint Publication 3-26," I-9.
[207] Irregular Warfare is defined as, "A violent struggle among state and non-state actors for legitimacy and influence over the relevant population(s). Irregular warfare favors indirect and asymmetric approaches, though it may employ the full range of military and other capacities, in order to erode an adversary's power, influence, and will. Joint Staff. "Joint Publication 3-26," GL-7.

may occur due to the expanding target list of CT operations given the ease with which targets are pursued, thereby creating "mission creep" into COIN operations, and causing instability due to a potentially more indiscriminate targeting practice. Third, "legitimacy gap" is created when CT operations are conducted in a country because it implies the host government cannot unilaterally counter the threat, thereby causing an incentive to publicly protest strikes and argue threats to sovereignty. Forth, "leverage" is lost with the host government when it becomes obvious that the fight cannot afford to be lost, and the host government and the insurgency can exploit the lost leverage by dragging out the war.[208]

Equally important in understanding what to do in counterinsurgency is understanding what not to do. In counterinsurgency, Sepp cautions against an emphasis on capturing or killing insurgents as opposed to placing the emphasis on working to placate the population and assuage their needs.[209] In particular the use of air power as a means of "attriting them to a point of collapse" is a method proven to be unsuccessful in counterinsurgencies.[210] Yet in counterterrorism "the threat and elusiveness of the target demand an immediate, often lethal response."[211] Counterterrorism and counterinsurgency have separate meanings for what the military is to achieve in either one, and more importantly, how it is to be achieved. Bolstering the capability of the central government or disregarding the role of the central government is the obvious contradiction when using the terms interchangeably and drones become the culpable party in excessive force when trying to achieve either one.

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[208] Boyle, 345-352.
[209] Sepp, 11.
[210] Ibid.
[211] Boyle, 346.

Drone use in CT and COIN

Kenneth Anderson, making "The Case for" drones, takes the position that drones may be ideal for counterinsurgency because of the "increased discrimination in time, manner, and targeting not available via any other comparable weapon platform."[212] Anderson states that because ground forces are not in imminent danger, there is no need for rushed decisions on the use of force. The long loiter time of drones coupled with their ISR collection capabilities facilitates gaining more fidelity on a target in order to make a decision on what to do next.

Furthermore, Anderson addresses the question on whether or not drone strikes "make it more difficult for ground forces attempting to carry out a hearts-and-minds campaign to win over the local population."[213] The thought being that drone strikes cause too many civilian casualties, consequently increasing recruitment for an insurgency. But Anderson's claim to the causal relationship between drone strikes and recruitment states it is "contingent and uncertain."[214] Daniel Byman addresses questions that drones "kill today's enemies but creates tomorrow's in the process" by indicating the lack of concrete evidence of the relationship.[215] Generally speaking, there seems to be a lack of concrete evidence behind a relationship between drone strikes and joining an insurgency.

However, there are multiple assessments on what drives someone to join to fight. With respect to Pakistan, Byman down plays the causal relationship and questions the

[212] Kenneth Anderson. "The Case for Drones." (2013): 15.
[213] Anderson, 19.
[214] Ibid.
[215] Daniel Byman. "Why Drones Work: The Case for Washington's Weapon of Choice." *Foreign Aff.* 92 (2013): 39.

bias of the polls conducted, the nature of how conclusive the results are, and the point that most of the targets of drone strikes are enemies of Pakistan.[216] On a larger scale, Kilcullen concedes, "many members of the global jihad are related by birth or marriage… sons of jihadists often follow their fathers and widows often avenge their husbands by becoming suicide bombers."[217] His approach asserts a more familial position in some regard. In either case, Audrey Kurth Cronin argues that might not matter as much because the real issue is that "the United States is losing the war of perceptions, a key part of any counterterrorism campaign."[218] Whether or not drones are causing more adversaries than they are eliminating appears to remain inconclusive.

Despite the evidence in establishing a clear relationship between drone strikes and recruitment for an insurgency, Anderson takes on the claim of comparing collateral damage in military operations. He states that if any force is to be used then collateral damage will be inevitable. Conversely, if the situation does not allow for force to be used, "then any civilian death by drones is excessive."[219] Comparing the degree of civilian casualties in a kinetic CT strategy to a non-kinetic strategy [read: COIN] that does not include force of any kind is not practical.[220] In other words, once it is determined that CT should be confronted with physical force civilian casualties are an unfortunate consequence. Therefore, the method of kinetic action against CT should involve the method that produces the least amount of collateral damage. Anderson posits

[216] Byman, 39.
[217] Kilcullen, "Countering Global Insurgency," 600.
[218] Audrey Kurth Cronin. "Why Drones Fail: When Tactics Drive Strategy." *Foreign Aff.* 92 (2013): 47.
[219] Anderson, 21.
[220] Ibid.

that drones have been able to meet that challenge, not flawlessly, but with great improvements on civilian casualties.[221]

Using counterinsurgency and counterterrorism in the correct context should drive how the use of force is applied. This enables a more appropriate use of drones and if things go wrong, it places the emphasis on the goals of the mission and not an inanimate object. Intelligence collection may be the ideal role in a counterinsurgency, while kinetic strikes missions take the lead in counterterrorism operations. On the other hand, COIN and CT operations benefit from a weapon system capable of both intelligence and strike capabilities when used appropriately.

Case Study

This case study will examine the use of drones, and more specifically armed drones, in Pakistan, Yemen, and Afghanistan. The aim of this case study is to determine if drones are more beneficial to counterinsurgency or counterterrorist missions. The evidence suggests there are benefits to both, but also repercussions if they are used disproportionately or sparingly. These countries were chosen because of their uniqueness in highlighting the influence of drones by the United States as it uses force in prosecuting its targets. The application of force to conduct a counterinsurgency or counterterrorism mission is a central component of what is at stake here. Pakistan provides an example of where counterterrorism and counterinsurgency operations seem to be conducted concurrently. By contrast, Yemen provides an example of armed drones supporting counterterrorism operations without a significant number of American ground forces and

[221] Ibid.

Afghanistan underscores the judicious use of force as it largely pertains to a counterinsurgency mission.[222]

Drone Use in Pakistan

Armed drones in Pakistan are used to pursue an enemy seeking refuge there. Enemy forces attack Coalition forces in Afghanistan and then move into Pakistan, outside the traditional reach of Coalition forces. Targets are generally in Pakistan's North and South Waziristan provinces under the control of Taliban groups.[223] Essentially, the Taliban, either through tacit approval or endorsement of the Pakistani government, created a "state-within-a-state" in the Federally Administered Tribal Area (FATA).[224] These are home to some of the most dangerous groups such that it constitutes "one of the greatest threats to American domestic security."[225] Furthermore, this sanctuary is said to be home to al-Qaeda plotting new attacks against the United States.[226]

To deny refuge in the safe havens of the un-governed FATA, the United States, according to the DoD definition, does not appear to be addressing the "root causes" of the war, but rather taking the counterterrorist approach and taking "action directly against terrorist networks."[227] This is done generally through directly targeting the senior leadership and through targeting the physical and behavioral characteristics of an

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[222] With respect to Pakistan, the threat to ground forces is in reference to the Coalition forces in Afghanistan. This is not meant to imply the United States is not engaged in traditional counterinsurgency activities or other displays of soft power in Yemen.
[223] The Long War Journal, "Charting the data for US airstrikes in Pakistan, 2004 – 2014," http://www.longwarjournal.org/pakistan-strikes.php, updated September 28, 2014, accessed on October 6, 2014.
[224] Brian Glyn Williams. "The CIA's covert Predator drone war in Pakistan, 2004–2010: the history of an assassination campaign." *Studies in Conflict & Terrorism* 33, no. 10 (2010): 873.
[225] Ibid., 871.
[226] Ibid.
[227] Joint Staff, "Joint Publication 1-02," 58 and 59.

individual or group of people.[228] The latter of which is referred to as "signature strikes."[229] Although the number of airstrikes is not divided out to identify which strikes are more *choreographed* and deliberate and which ones are signature strikes, the greater the level of target fidelity appears to take on the traits of what a counterinsurgency strike would look like. While signature strikes seem to be counterterrorist in nature by striking to combat a force where there is no time to sort out each individual in the area.

The Long War Journal indicates 363 airstrikes were conducted in Pakistan from 2004 through September 2014, 352 of which occurred from 2008 through September 2014.[230] The damage assessment from these strikes since 2006 killed "2,647 leaders and operatives from Taliban, Al-Qaeda, and allied extremist groups."[231] The impact of these attacks has contributed to the loss of safe haven for these extremist groups and consequently decreased the ability for al-Qaeda and like groups to plan future attacks.[232] However, these attacks also killed 156 civilians.[233] The evidence suggests that from a counterterrorist perspective, to use force expeditiously, these statistics may seem to be a success, but in a counterinsurgency, where force is used judiciously, 156 killed civilians seems too high to be considered a success, despite the fairly low ratio.

[228] Micah Zenko. "Reforming U.S. Drone Strike Policies." (Council on Foreign Relations, 2013), 12.
[229] Ibid., 12.
[230] The Long War Journal, "Charting… Pakistan."
[231] Ibid.; According to The Long War Journal, no damage assessment data is available for 2004 and 2005.
[232] Zenko, 10.
[233] The Long War Journal, "Charting… Pakistan."

Drone Use in Yemen

By contrast, in Yemen, from 2002 until September 2014, 103 airstrikes were conducted resulting in the death of 498 al-Qaeda and affiliates and 105 civilians.[234] The Yemen strikes produced more than three times the number of civilian casualties by comparison – approximately five and a half percent of the total casualties were civilians in Pakistan, and nearly eighteen percent in Yemen. This is an important figure because where a counterterrorist policy might be implied in Yemen, collateral damage may have a higher threshold.

Despite the criticism President Abd Rabbo Mansour Hadi received due to high collateral damage from airstrikes, he "remained a strong U.S. counterterrorism partner in 2013."[235] Hadi is fighting al-Qaeda in the Arabian Peninsula (AQAP) as they make an aggressive campaign to control parts of Yemen from which to plan attacks against the United States.[236] As a result, Hadi has partnered with the United States to support drone strikes and accepted support in the form of "intelligence, logistics, weapons, ammunition" to enhance the Yemeni military and security forces in combating AQAP.[237] A strong counterterrorist partner to the United States, the Yemeni government is also working to employ soft power. As AQAP takes the approach of "orchestrating a prolific insurgency" against the government, the Yemeni government is developing stability

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[234] The Long War Journal, "Charting the data for US airstrikes in Yemen, 2002 - 2014, "http://www.longwarjournal.org/yemen-strikes.php, updated September 27, 2014, accessed on October 6, 2014.
[235] U.S. Department of State, Bureau of Counterterrorism, "Country Reports on Terrorism 2013," http://www.state.gov/j/ct/rls/crt/2013/224823.htm.
[236] Rohan Gunaratna. *Inside Al-Qaeda: global network of terror*. Columbia University Press, 2002, 139-141.
[237] Thomas Joscelyn and Bill Roggio, "US strategy against Islamic State to mirror counterterrorism efforts in Yemen, Somalia," The Long War Journal, September 11, 2014, http://www.longwarjournal.org/archives/2014/09/us_to_strategy_again.php.

operations.[238] To that end, the Yemeni government is pursuing counter radicalization programs for "rehabilitation and reintegration" of the government's adversaries.[239] Thus, the Yemeni government is addressing the "root causes" of terrorism within its borders, while also permitting drones and other uses of force to counteract terrorism directly.

Drone Use in Afghanistan

In Afghanistan, a fairly clear counterinsurgency mission against the Taliban, the use of force is heavily scrutinized.[240] General McChrystal, in cautioning about the use of force sparingly and proportionally states, "air power contains the seeds of our own destruction if we do not use it responsibly."[241] After a significant loss of civilian life from manned aircraft, a clear message was needed to assure the Afghan government and people that the use of force would be applied more proportionately, and with more precision.[242] To be sure, United States troops were required to weigh the use of force "to protect their troops" while also ensuring the safety of the civilian population.[243] In other words, the counterinsurgency mission dictates that the safety of the civilian population and the reputation of the Afghan government are important considerations while pursuing the adversary.

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[238] Joscelyn and Roggio, "US strategy against Islamic State…."
[239] U.S. Department of State, Bureau of Counterterrorism, "Country Reports on Terrorism 2013."
[240] The Taliban are not a Foreign Terrorist Organization according to the United States Department of State, who maintains the list of foreign terrorist organizations. Haqqani Network (HQN) and Tehrik-e Taliban Pakistan (TTP) are designated terrorist organizations. "Foreign Terrorist Organizations (FTOs) are foreign organizations that are designated by the Secretary of State in accordance with section 219 of the Immigration and Nationality Act (INA), as amended. FTO designations play a critical role in our fight against terrorism and are an effective means of curtailing support for terrorist activities and pressuring groups to get out of the terrorism business." United States Department of State, http://www.state.gov/j/ct/rls/other/des/123085.htm.
[241] Dexter Filkins, "U.S. Tightens Airstrike Policy in Afghanistan," The New York Times, June 22, 2009, http://www.nytimes.com/2009/06/22/world/asia/22airstrikes.html?_r=0.
[242] Ibid.
[243] Ibid.

Indeed, through proper use, drones in Afghanistan are in part one of the ways to reduce civilian casualties under a counterinsurgency model pursued by military commanders.[244] The primary function of drones in Afghanistan appears to be for intelligence collection, with strike capabilities as a collateral benefit. General McChrystal remarked on the intelligence collection capabilities of drones as "extraordinarily effective" in a dynamic environment.[245] With respect to the use of force by drones, General Mueller stated the role of drones in the counterinsurgency strategy "isn't about going out and finding" insurgents, but when they do find them, strike capabilities are leveraged.[246] A more measured use of drones in Afghanistan to support ground forces conducting counterinsurgency operations is an example of an effective use.

Mixed Messaging on the Use of Force

In Pakistan, the mission seems to be less clear. The Pakistani government has allowed the use of drone strikes in some instances, but publicly lashed out against them in other settings. As discussed in Chapter One, former President Zardari had a careless attitude to the amount of civilian casualties caused by targeting al-Qaeda by saying, "Kill the seniors. Collateral damage worries you Americans. It does not worry me."[247] As callous as it may seem, perhaps Zardari's approach is more reflective of the counterterrorism perspective in that once the use of force was determined to be the appropriate response to combat militant extremists in the FATA, collateral damage was

[244] Christopher Drew, "Drones Are Playing a Growing Role in Afghanistan," The New York Times, February 20, 2010.
[245] Ibid.
[246] Ibid.
[247] Peter Bergen and Katherine Tiedemann. "Washington's Phantom War: The Effects of the US Drone Programs in Pakistan." Foreign Aff. 90 (2011): 16.

an inevitable outcome. Otherwise, his position seems to be far more damaging than would be the perception of drone strikes. However, Zardari also claims drone strikes "result in loss of precious lives" and are "counterproductive" and create a "credibility gap."[248] Zardari's attempt to restore credibility in his government's ability to deal with the threat is akin to the principles of counterinsurgency. Shirking off collateral damage would be directly at odds with the principles of a counterinsurgency by not protecting his population. This is an ideal example of trying to use drones to achieve two separate missions – counterterrorist and counterinsurgency.

In what appears to be in retaliation for the deadly attack on the international airport in Karachi in June 2014, Pakistan asked the United States for help and granted, "express approval" for drone strikes to target those responsible for the attacks.[249] Such approval shows when there is a clear benefit to attacking an adversary in an inhospitable area such as the FATA, drones are very effective, even from a country that has been very critical of drone use. They are an effective weapon system against an enemy in austere and remote locations.

The government of Pakistan seems to be culpable of the mixed emotions felt by its population on the use of drones by endorsing strikes that effectively eliminate senior leadership without civilian casualties, then condemning them when there is public outcry over civilian casualties. If drones violate state sovereignty, thereby undermining the role of the central government, the outcome of the strike is immaterial. While civilian

[248] Williams, 881.
[249] Fox News, "US drone strike kills 10 in Pakistan, Islamabad intelligence officials say," June 12, 2014, http://www.foxnews.com/world/2014/06/12/us-drone-strike-kills-10-in-northwest-pakistan-islamabad-intelligence-officials/

casualties may exacerbate the negativity, successful strikes should not be heralded as a victory, but rather another violation of sovereignty.

The way these terms are being used synonymously could impact the way drones can support counterinsurgency and counterterrorist operations. Armed-drone strikes in a counterterrorist mission, such as in Pakistan, could cause backlash among locals making it more difficult to counter an insurgency. On the other hand, not leveraging the strike capability of drones in a counterterrorist mission, because of the lack of target fidelity, could further delay successful counterterrorist missions by not striking the enemy when feasible. In either case, the emphasis has to be placed on how the use of force should be applied to achieve the mission – to counter an insurgency by bolstering the central government, or through an aggressive counterterrorist campaign, under which the priority is to target the network.

Analysis

Debating the semantics is more than perfunctory, as speaking in a common language removes the ambiguity as to what the mission is supposed to achieve. Properly classifying an enemy is paramount in determining how to defeat the enemy. An insurgent force using terrorism tactics or a terrorist group inciting an insurgency "does not make them fundamentally equivalent or susceptible to the same remedies."[250] The use of force is applied differently. An airstrike, from a manned or unmanned aerial vehicle, is still an airstrike. A target is identified, a missile is launched, and there is an explosion on the ground. However, the evidence suggests the difference is how much thought is given to what happens next and who was at the receiving end of the strike.

[250] Boyle, 335.

Second and third order effects may be measured in a CT strike, but in a COIN strike they must be a primary factor. Furthermore, the level of fidelity on the intended target must also be of paramount concern in a COIN strike so as not to further the chasm between the insurgent force and central government.

This is not to assert that the lack of target fidelity in a CT strike is good, but rather the evidence suggests in a CT mission the focus is directly on an enemy via kinetic action. Whereas, a COIN mission dictates the use of force to be more "choreographed." To be sure, in Afghanistan, General McChrystal curtailed the use of force, specifically airpower, to reduce civilian casualties, thereby protecting the population from collateral damage. Thus, this restored the "legitimacy" of the Afghan central government as an able bodied instrument of power to protect its people. Whether this decision was made at the behest of the Afghan government or the United States government, or that it was the right thing to do (reduce collateral damage), is immaterial because the outcome was the same – to restore faith in the central government and protect the population.

On the other hand, more indiscriminate targeting practices, such as "signature strikes," can cause instability by targeting groups of people characteristically or behaviorally displaying a threat without exact knowledge of who they are. Such operations jeopardize the goals of a more "choreographed" use of force in COIN, but they do have their place in CT. In Yemen, where AQAP threatens the stability of the government and actively pursues control of terrain, the government has partnered with the United States to leverage airpower and push back the terrorist group. Additionally, the United States is engaged in providing material support to Yemeni security forces. However, Yemen is far from a success story. If AQAP successfully incites a "prolific

insurgency," the Yemeni government may have to relook its endorsement of American airpower if the levels of collateral damage do not drop.[251]

The approach to Pakistan seems to favor a more counterterrorist approach whereby perceptions of stability of the Pakistani government is subordinate to the primary goal of targeting the adversary. The number of airstrikes in Pakistan, without United States ground forces there, suggests these strikes are used as an offensive operation solely to attrite the enemy – something COIN experts have cautioned against when applying airpower in COIN operations. Where ground forces are present, drones not only conduct strike missions, but also support defensive or force protection operations. The absence of United States ground forces in Pakistan to protect, further supports a more CT role of drones in Pakistan. To be sure, the raid on Osama bin Laden's compound also suggests CT plays a larger role in the strategy toward enemies located within Pakistan.

By contrast, the government of Pakistan, despite its approval for drone strikes and hosting airbases, from which drones are launched, makes allegations that their use is "counterproductive" and an affront to the sovereignty of Pakistan, therefore creating a "legitimacy gap."[252] However, Pakistan likely takes this approach because they are confronted with their own challenge of "struggling to deal with its stubborn militancy problem."[253] It stands to reason that the Pakistani government is sensitive to public opinion of drone strikes as they employ missions to strengthen the legitimacy of their central government, but also to combat its enemies within the state. If Pakistanis view

[251] Joscelyn and Roggio, "US strategy against Islamic State…."
[252] Williams, 881 and 882.
[253] Fox News, "US drone strike kills 10 in Pakistan, Islamabad…."

drones as a violation of state sovereignty, that would make their government seem weak and vulnerable. A counterinsurgency mission is likely more appropriate for the Pakistanis to conduct within their own country. However, this approach would mean President Mamnoon Hussain would have to stay clear from making the assertions Zardari did about civilian casualties.

However, United States CT-based missions in Pakistan do not appear to mutually support the Pakistani's conducting their own COIN mission. By chance there will be mutual benefits, for example when a drone strike only kills known insurgents or terrorists that pose a threat to Pakistanis, without causing collateral damage. But if Pakistanis view drones as an affront to their sovereignty, all strikes should be viewed in the same manner, despite the outcome of the strike. Indeed, drones have the potential to cause collateral damage. As with any facet of armed warfare, when the use of force is chosen to stop an aggressor, collateral damage is an unfortunate consequence. The Pakistanis cannot have it both ways – support when it works and then outright rejection of the very idea when it does not.

Drones appear to be able to support COIN operations through persistent ISR collection. A high level of fidelity can be achieved in order to ensure it is the right target and if force is decided to be used, they can chose a moment to strike when there is no risk of collateral damage. Furthermore, drones remove the need for ground forces, which can be another contributing factor to the instability on the ground. On the other hand, as the evidence suggests, the use of airpower in a counterinsurgency, such as in Afghanistan, should be used in measured amounts and only after alternatives are deemed unsuitable.

By contrast, drones also appear to have their place in CT missions, because they are a reliable offensive measure against a terrorist network. In places like North Waziristan, Pakistan, drones have been able to enter inhospitable environments to target adversaries seeking refuge. Similarly, in Yemen they have been an integral part in combating AQAP without placing ground forces in harms way. As a weapon in CT missions, the evidence suggests drones have been successful in removing adversaries from the battlefield.

Differentiating between a counterterrorist and counterinsurgent strategy seems to be the crux of the issue in determining if and what level of force is to be used. Nevertheless, drones appear relevant in being able to support either counterterrorist or counterinsurgent operations. In order to ensure the use of force is consistent with the principles of its mission, the type of mission will have to be identified first. Based on the evidence presented in this chapter, leveraging the benefits of armed unmanned aerial vehicles should be carefully measured with how the use of force should be applied to ensure the goals of the overall strategy are what drive the use of drones.

Conclusion

After thirteen years in Afghanistan and almost half that in Iraq simultaneously, the United States government and military leaders alike understandably seek to leverage the best parts of both COIN and CT – to stabilize the host nation's government to prevent further insurgencies, while dealing swift defeat to the enemies of the United States. However, adopting one strategy [COIN] to achieve the goals of the other [CT] is unclear and ineffective. The lack of clarity could result in the misplacement of blame if things go

wrong. Claiming that drones are counterproductive assumes there is a clear, or at least common, goal that one can achieve. Drones have many benefits well outside their use as an armed weapon, such as their intelligence collection capability. To say drones cause too many civilian casualties or challenge state sovereignty misplaces culpability and overlooks how the use of force was to be applied.

The lack of a conclusive study with evidence detracts from a definitive answer on a causal relationship of drone strikes resulting in additional people joining an insurgency or terrorist group. Further research could enhance the fidelity on the relationship between the two.

Leaders in stressful situations look for the best options to support decisions that achieve desired results. Drones not only provide kinetic strike options, but also enhance target knowledge. Sometimes the decision is made from the best of the worst options available, but they are options nonetheless. When things go wrong, culpability should rest with the inaccurate application of the use of force, not on an inanimate object.

Conclusion

Airpower has long been used as an implement of coercion to get an enemy to change its behavior, with varying degrees of success.[254] At the time of this writing, the United States is using its airpower, among other elements of national power, to confront the group Islamic State of Iraq and Syria (ISIS) in northern Iraq. American airstrikes have had some successes in reinforcing the Kurds, but airpower alone is not projected to be the "decisive factor" in combating ISIS. On the other hand, airstrikes have enabled ground forces to regain the initiative, and "buoyed the spirits of the fighters" on the ground while providing some setbacks to the enemy.[255]

However, airstrikes alone, from manned or unmanned aircraft, are not likely able to achieve the long-term strategy. Ground forces will have to be part of that larger plan. Occupying terrain is something ground forces have done for centuries. Despite the gravitation to technological advancements, in the words of Max Boot, "when it comes to reinforcing regime change, there is still no replacement for a rifleman on a street corner."[256] For their part, UAVs provide tactical advantages and motivate ground forces, but decisive victory will come from more sweeping change in the political landscape reinforced by ground forces securing the terrain. Airpower, in the shape of drone strikes, is effective at targeting individuals, but is unable to eradicate complete terrorist organizations.[257]

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[254] Horowitz and Reiter. "When does aerial bombing work…," 148.
[255] Rod Nordland and Helene Cooper, "Capitalizing on U.S. Bombing, Kurds Retake Iraqi Towns," The New York Times, August 10, 2014, http://www.nytimes.com/2014/08/11/world/middleeast/iraq.html?_r=0
[256] Max Boot. "More Small Wars." *Foreign Aff.* 93 (2014): 11.
[257] Ibid.

For all the benefits of drones, the evidence suggests they will not be able to achieve the same strategic objectives as ground forces. In the case of the United States' support in Mali, unarmed drones were supporting a larger ground campaign led by French and Malian forces. In the case of fighting ISIS in northern Iraq, and Syria to some extent, airstrikes are supporting Kurdish ground forces. The difference in these two examples challenges the argument that drones make it easy to go to war (*jus ad bellum*). In the case against ISIS, these are armed strikes from drones and fighter jets.[258] Airpower was used to facilitate regaining the initiative of Kurdish ground forces by suppressing the firepower of ISIS. On the other hand, in Mali, unarmed drones were used to support the ground battle. Drones were not directly engaging in armed combat, but rather providing intelligence collection support for ground forces. This is an important distinction to make because this highlights unmanned aerial vehicles as a way to support a larger ground conflict without exposing Americans to the dangers of war. Had an American soldier been killed, or taken hostage, in the Malian conflict, that may have changed the level of armed support entirely. Drones provided the option to support the conflict without directly increasing the risk to American forces and without conducting an armed act of aggression.

Armed drones endure the brunt of the arguments against their use from the level of collateral damage. However, more evidence is needed on the number of civilian casualties caused by drones and to fully understand the relationship between drone strikes fueling an insurgency or terrorist organizations. Furthermore, more clearly defining the mission of armed UAVs will enable a more defendable position regarding what level of collateral damage is acceptable.

[258] Nordland and Cooper, "Capitalizing on U.S. Bombing…."

In a CT mission, defining individuals in the close proximity of known al-Qaeda as collateral damage is fairly unclear at times because, as Byman states, "al-Qaeda is an insular, paranoid organization – innocent neighbors don't hitchhike rides in the back of trucks headed for the border with guns and bombs."[259] Byman makes an interesting point in terms of the likelihood that someone that close to an al-Qaeda operative is likely al-Qaeda too. This assertion highlights the fine line between collateral damage and guilty by association. Although this is an interesting point to make, and the evidence may support the majority of the time the unknown individual is indeed an al-Qaeda operative, there is also evidence to suggest it is not a perfect solution.

For example, a Yemeni schoolteacher, who by all accounts was not an al-Qaeda operative, did stop to offer individuals a ride in the back of his pickup truck.[260] Moments later the vehicle was struck from the air and killed all the vehicle's occupants. The death of an innocent and respected member of a community challenges the blanket acceptance of armed intervention and could cause some to resent the manner with which terrorists are neutralized.

However, for each anecdote that could cause someone to join a militant group, it appears that there is another story of strong support for American intervention in combatting AQAP. In April 2014, two American officials in Yemen defended themselves from an apparent kidnapping by killing the two AQAP operatives.[261] They were hailed as heroes from a Yemeni eyewitness, because he thought, "Yemenis needed

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[259] Byman, 36.
[260] Farea Al Muslimi, "US Drone Attacks In Yemen Protect No One But Al-Qaeda," Yemen Time, January 9, 2014, http://www.yementimes.com/en/1745/opinion/3332/US-drone-attacks-in-Yemen-protect-no-one-but-Al-Qaeda.htm. Multiple sources indicate that the schoolteacher was not involved with al-Qaeda. It is unclear if weapons were present in this instance.
[261] Ellen Knickmeyer and Hakim Almasmari, "Witnesses Describe U.S. Officials Fatally Shooting Yemenis in Kidnap Attempt," The Wall Street Journal, May 10, 2014, http://online.wsj.com/articles/SB10001424052702304655304579553430639478414

that lesson."[262] Although, this does not directly support Western drone use in Yemen, this is important nonetheless because it does show some Yemenis may support eradicating terrorists from their land. In other words, had collateral damage been inflicted, it does not imply one would resort to a lifetime of militant extremism (e.g. join al-Qaeda) against the United States. Given the polarity in anecdotes, more research is needed to make definitive conclusions about the causal relationship between collateral damage from drone strikes and fueling an insurgency or causing some to join a terrorist group.

To that end, determining the strategies of the conflict will play a crucial role in determining how the use of force is applied from drones. This is important due to the increased use of UAVs. Drones are effective CT weapons because they can pursue enemies of the United States in hard to reach places while avoiding boots on the ground. Drones also support COIN missions through their ability to provide persistent and uninterrupted coverage of a target over long periods of time for intelligence collection purposes or, if the environment is suitable, for a kinetic strike.

The ease with which some targets can be engaged is therefore the driver behind the need for a transparent policy on the use of force via drones. Drones require a transparent policy to structure its use and to prevent the United States from entering into conflicts because it is easy. Zenko's recommendation for adjusting policies guiding the use of drones is that the President should restrict the use of drone strikes to only al-Qaeda senior leadership or individuals known to be part of an operation against the United States or its allies is a step in the right direction.[263] Absent clear data on the causal

[262] Knickmeyer and Almasmari, "Witnesses Describe U.S. Officials Fatally Shooting…."
[263] Micah Zenko. "Reforming U.S. Drone Strike Policies." (Council on Foreign Relations, 2013).

relationship of drone strikes and increasing the ranks of enemy fighters, this is an ideal situation to curb the arguments about the level of collateral damage, while ensuring the security of the United States is preserved.

Admittedly, there are shortcomings of this thesis and there is room for future research to refine these conclusions. To begin with, some of the assertions made within this thesis are based on data of drone strikes and the amount of civilian casualties caused by the strikes. This has some complications in that the data itself may have some inconsistencies in how a civilian is defined. Miscounting civilian casualties could change the analysis behind the use of force in certain missions. Furthermore, a question to ask is, what alternatives are there to pursue the enemies of the United States in hard to reach places? The unfortunate truth in this matter is that upsetting some local tribesmen in the hinter regions of Pakistan or Yemen is likely better than letting al-Qaeda and Taliban fighters run free. Or is it?

Questions to guide further research could take the form of, is the United States relying on the utility of UAVs too much? Will policy decisions seek the light footprint approach before overwhelming decisive force is used? If so, are there any consequences? If the risk of the mission is not worth the risk to a human, should the United States enter into the operation? This is an interesting question because it does not mean that drones cannot be used in lieu of ground forces, but that could be the test to determine if the target is worth prosecuting.

The premise that, "drone strikes are the best worst option for dealing with a hard to reach enemy," requires that this use does not precipitate into an over-extension of the

United States flexing an element of national power because it can.[264] As a natural progression of a technologically superior military, UAVs have proven to be a reliable and dependable intelligence collection platform with a strike capability; however, they are no substitute for human engagement on the ground, and require a clear and unambiguous mission to guide the use of force by the unmanned system.

[264] Williams, 887.

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